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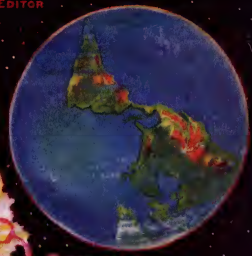
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EDITOR

July

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WONDER STORIES

"The Magazine of Prophetic Fiction"



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JULY, 1935

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• ON THE COVER

This month we see something happening upon another world. It cannot be the Earth because we can see the latter hanging huge and close in the sky. Where are we, what is going on, and why? These questions are for our readers to answer in short-short stories to be submitted in the contest described and outlined on page 134 of this issue.

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Good News for Members of the SCIENCE FICTION LEAGUE

THE following list of essentials has been prepared for members of the SCIENCE FICTION LEAGUE by the officers at Headquarters.

A FEW WORDS AS TO THE PURPOSE OF THE LEAGUE

The SCIENCE FICTION LEAGUE was founded in February, 1934. The Executive Directors are as follows:

Forrest J. Ackerman, Rando Binder, Jack Darrow, Edmund Hamilton, David H. Keller, M.D., F. Schuyler Miller, Clark Ashton Smith, and R. F. Starn, Hugo Gernsback, Executive Secretary, Charles D. Horne, Assistant Secy.

The SCIENCE FICTION LEAGUE is a membership organization for the promotion of science fiction. There are no dues, no fees, no initiations, in connection with the LEAGUE. No one makes any money from it; no one derives any salary. The only income which the LEAGUE has is from its membership essentials. A pamphlet setting forth the LEAGUE'S numerous aspirations and purposes will be sent to anyone on receipt of a 3c stamp to cover postage.

One of the purposes of the SCIENCE FICTION LEAGUE is to enhance the popularity of science fiction, to increase the number of its loyal followers by converting potential advocates to the cause. To this end, the SCIENCE FICTION LEAGUE supplies members with membership letterheads, envelopes, label buttons, and other essentials. As soon as you are enrolled as a member, a beautiful certificate with the LEAGUE'S seal will be sent to you, providing life in stamps or coin is sent for mailing and handling charges. However, this will be given free to all those enrolled members who find it possible to call personally at Headquarters for it.

Another consideration which greatly benefits members is that they are entitled to preferential discounts when buying science fiction books from numerous firms who have agreed to allow lower prices to all SCIENCE FICTION LEAGUE members. The book publishers realize that, the more fervid fans there are to boost science fiction, the more business will result therefrom; and a goodly portion of the publishing business is willing, for this reason, to assist SCIENCE FICTION LEAGUE members in increasing their science fiction collections by securing the latest books of this type at discounted prices.

SCIENCE FICTION ESSENTIALS LISTED HERE SOLD ONLY TO SCIENCE FICTION LEAGUE MEMBERS

All the essentials listed on this page are never sold to outsiders. They cannot be bought by anyone unless he has already enrolled as one of the members of the SCIENCE FICTION LEAGUE or signs this blank on this page (which automatically enrolls him as a member, always provided that he is a science fiction enthusiast).

If, therefore, you order any of the science fiction essentials without filling out the blank, or a form (unless you are already enrolled as a LEAGUE member), your money will be returned to you.

Inasmuch as the LEAGUE is international, it makes no difference whether you are a citizen of the United States or any other country. The LEAGUE is open to all.

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To the left is an illustration of the certificate provided all members of the SCIENCE FICTION LEAGUE. It is sent to all members upon receipt of 15c in stamps to cover mail charges.

WONDER STORIES is the voice of the SCIENCE FICTION department appears in the magazine.

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Science Fiction League

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John Dow

a member of this League.

In Witness whereof, this Certificate has been officially signed and presented to the above

Local Chapter

Short-Short Story Contest

WE have not had a contest for our readers in about three years, and we feel that it is due time for another. This time we are asking for short-short stories. Nothing could be more desirable than this, for it tends to develop literary inclinations in many of our readers who possess the dormant qualifications of fiction authors. Sit down now, study the cover of the current issue, and write a manuscript using this scene as a basis—we may discover in you one of the leading authors of future years.

We are offering a few prizes for the best manuscripts:

First Prize—\$25 in cash

Second Prize—\$10 in cash

Third Prize—\$7.50 in cash

First Honorable Mention—Our regular space rates.

**Second to Seventh Honorable Mentions—
each two-year subscription to WONDER STORIES.**

Total Value of Prizes: \$68.00

The trend of the times seems to be towards shorter and shorter stories. A couple of decades ago, a short story was anywhere from ten thousand to twenty thousand words. Of late, the short-SHORT story has gained ascendancy in most magazines, and has opened up a new field for embryo authors. A short-SHORT story is one that runs to not more than 1,500 words; yet the author still finds it possible to tell a coherent tale, into which he packs just as much literature and entertainment as does his more ambitious brother who writes stories from ten thousand words up.

Following are the rules of the contest:

(1) A short-SHORT science-fiction story is to be written around the cover picture of this July issue of WONDER STORIES.

(2) The story must be of the science-fiction type; and should be plausible in the light of our present knowledge of science.

(3) The story must be between 1,000 and 1,500 words in length.

(4) All stories must be submitted typewritten double-spaced, or legibly penned; pencilled matter cannot be considered. The stories submitted must be received flat or folded—not rolled.

(5) No manuscript will be returned.

(6) The Editors cannot enter into correspondence on stories submitted.

(7) Three cash prizes will be awarded: First Prize, \$25.00; Second Prize, \$10.00; Third Prize, \$7.50. There will be seven honorable mentions—the first to receive space-rates, and the second to seventh to receive each a two-year subscription to WONDER STORIES.

(8) The prize winning stories and the first Honorable Mention will be published in this magazine.

(9) In awarding the prizes, WONDER STORIES acquires full rights of all kinds; such as translation into foreign languages, syndicate rights, motion-picture rights, etc. The Board of Editors will be the sole judges.

(10) Any stories, other than the prize winners, may be selected by the Editors for the development into longer stories by our experienced authors, with our standing offer of \$10 for each plot so treated to the author of the original short-short.

(11) Contest closes July 5, 1935. At this date all manuscripts must be in our hands. Winners will be announced in our October issue.

(12) Anyone except the employees of the Continental Publications, Inc., and their families may enter this contest. It is not necessary to be a subscriber to the magazine.

Address all manuscripts to Editor, *Prize Cover Contest*, WONDER STORIES, 99 Hudson St., New York City, N. Y.

. . . . Prophetic Fiction is the Mother of Scientific Fact

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CHARLES D. HORNIG, *Managing Editor*

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WONDERS OF SUSPENDED LIFE

By HUGO GERNSBACK

SOONER or later, all the favorite and impossible-sounding plots of science-fictionists assume reality through the medium of the research laboratory.

It has been known for a long time that certain fish can be frozen solid and, after thawing out, quickly revived. It cannot be done with all fish, but certain of the hardier types that frequent the northern streams can survive the ordeal.

But freezing a warm-blooded animal, stone-hard, and then reviving it, is a somewhat different problem, and, up to now, scientists have been skeptical about it. At last, this difficult problem has been solved by Dr. Ralph Willard of Los Angeles, a research chemist, who announced last month that life had been restored successfully to a guinea pig, frozen to death, and kept in this frozen stage for four days. The process of ultimate restoration involves heat and blood transfusion, and Dr. Willard explained that four years ago he first tried the experiment in order to cure certain diseases. He discovered that by injecting sodium citrate into the system, he was able to destroy a certain chemical in the blood—*fibrogen*. This chemical usually causes coagulation after death, and that is the one stumbling block that the experimenters faced heretofore.

Dr. Willard injected the sodium citrate into the blood-stream and then placed the guinea pig into a sealed glass chamber in which oxygen and ether were pumped. When the animal was under the anaesthetic, carbon dioxide was pumped into the chamber. Subsequently, the guinea pig was frozen solid and, of course,

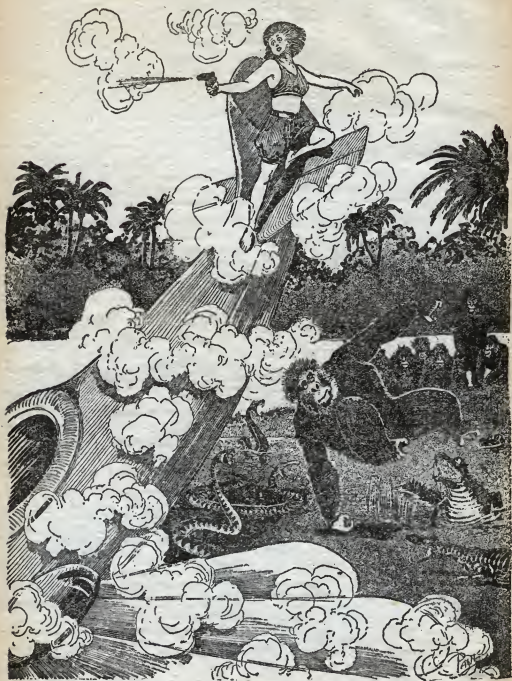
there was no longer a heartbeat. Four days later the animal was thawed out by means of slow heat; a shot of adrenalin and ephedrin into the heart, and other shots of blood into the veins completed the experiment. In a short time, the guinea pig revived, none the worse for its four days "death."

New experiments are to be made with dogs, later with monkeys and, finally, if possible, with human beings.

At the present time, the experiment depends on proper dehydration (the extraction of most of the water from the body) during the freezing act.

The experiment opens up all of the fantastic visions which have been described many times so realistically by our science-fiction authors. The point is that, if it is possible to survive the suspension of the bodily activities for four days, there is no reason why the freezing cannot be continued for four years, forty years, or 400 years; we then reach other possibilities of science-fiction, as that a man will voluntarily be frozen for an indefinite period, then after many years he can be brought back to life. That there will be innumerable men and women to undertake the risk of waking up in another century, there is no doubt, and sooner or later it probably will be done.

But what scientific use the experiment will serve otherwise, no one can foretell. Dr. Willard speaks of using the freezing to kill certain bacteria by means of this method, but undoubtedly there are many other uses, many of which can be imagined by any of our readers with a vivid imagination.



(Illustration by Paul)

How was I to know that I was practically committing suicide?

THE GREEN MAN OF GRAYPEC

By FESTUS PRAGNELL

PART ONE

(Statement of Learoy Spofforth, formerly lawn tennis champion of the U.S.A., and now in prison awaiting trial for murder.)

● I hereby declare that this statement is made entirely of my own free will, that no threats or promises have been made to induce me to confess, and in particular that I have not been subjected to any severe questioning by police. Indeed, since my arrest I have been treated with far more consideration than I have any right to expect. For this leniency, I thank the officials, though perhaps it may have been that they have not the heart to bully one whose interest in life is at an end, for it is my own brother who is dead.

They tell me I have killed my brother. They say I was found with a blood-stained weight in my hand, still banging away at the horrible mess that had been poor Charlie's head, that it took four strong men to hold me.

Hideous, terrible fact! I have wept until my tears ran dry. Now that Charlie is dead, I care not whether I go to the gallows or to a madhouse. Charlie the wonderful, Charlie the genius! For I loved my brother. Though the worship of the crowd has been my lot far more than it has been his, his mental powers were far more important than my athletic prowess; his name will be illustrious when I have been forgotten, save as his slayer. Alas that his own discoveries should have led to his death, and that I should have been the instrument of his fate! But even if he had foreseen the terrible end of his work, he would never have neglected his purpose; for his own life and mine as well were but pawns in the great work he

● Mr. Pragnell established himself as a first-class science-fiction author with our readers several years ago, but never before has he written anything to compare with this classic novel, the longest story he has yet composed. Our British author has put great effort into this work and succeeded in creating a piece of real literature with all the vivid action, realistic scenes, and absorbing, lifelike descriptions that can be packed into a thrilling and convincing array of 85,000 words.

Evolution, we should realize, not only effects human beings, but every living thing on earth, including the wild beasts of the jungle. Try to picture for a moment a mad world in which we find the most ferocious animals with a primitive, but definite, intelligence—and their effect upon the struggle for survival of mankind. Our author's picture is vividly painted. "The Exile of the Skies" by Richard Vaughan (Jan., Feb., Mar., 1934, WONDER STORIES) was voted the greatest science-fiction story of 1934, and we shall be greatly surprised if our readers do not give the 1935 honors to "The Green Man of Graypec."

Even the hardened editor threw everything else aside to finish this epic novel at one sitting, neglecting regular routine work in order to do so, and you can bet that it received a four-star-plus rating.

Enough of our ravings, however. All we can advise you to do is find the most comfortable chair in the house and prepare yourself for one of those rare treats you find but once in a long, long while—and live with Kastrove on the wild world of Kilsona!

was engaged in, the advancement of knowledge. Fame, wealth, importance, these mattered to Charlie not a rap.

And I murdered him. These hands struck the cowardly blow that stilled his far-sighted brain, ended his labors forever! For you whose duty it is to try me, I bear no animosity, nor to those who

arrested and charged me; this body that did this thing and may do further damage must be destroyed or restrained for the safety of others.

Though to me I care not what happens, to you, my judges, I say that never did I feel the slightest anger with my brother, the least desire to cause him harm. He was struck down by me yet not by me, absurd though this may seem. Practically nothing do I remember from the moment that, against my own will, I found my arms lifting that lump of metal and my legs rushing upon him, until I found myself in the lock-up. Why did I not avail myself of the automatic lying so conveniently in the drawer if it had not been that the being who actually committed the murder did not understand firearms? I tell you still that, but for what I have been told, I should not even know that Charlie is dead.

Give me time and I can explain everything, impossible though it all sounds. Look in Charlie's laboratory and you will find all the machines I shall describe. No, I am not mad, not in the way one usually means when one uses the word, insane, though I hope I soon shall be. Yes, hope, for a man cannot long endure the torture I suffer. Surely there must be a limit to the agony a man can stand and still live, and have I not yet reached that limit?

Ragged thoughts rend and tear my brain; my mind will not rest. I try to sleep, and still my brain is active, still my thoughts race on and on, in the same worn channels, weary, aching, hot with friction. My head is a reservoir of energy that finds no outlet, never stops; the last prop of reason must soon be worn away.

And that were not so great, so surprising a step; for the facts I have to tell are so unbelievable that the boundary between reason and unreason is but a flimsy, uncertain barrier. I am not owner of my own body; I am but part-tenant. I am also part-tenant of another body; but it is a thing of most exceeding smallness, of a smallness beyond the imagination of man—was, I mean, not is, for it is now fortunately dead. I know all this reads

as though I were trying to prove myself mad and so escape the consequences of my action, but hear me to the end, see the completeness with which I can explain everything, and then judge.

I must do something to occupy myself, so perhaps in writing down the whole story I may be able to relieve myself of some of the awful strain.

● Last week I visited my brother, thirty long years ago—thirty long years that passed in a single day! And those years were more than twice as long as the years we are accustomed to. My birth was 28 years ago, yet I am more than 88 years old—half of me, that is; the other half is dead, and if still alive would be thousands of years of age. Hear me out! Oh, I shall go mad!

I am even uncertain as to who I really am. My name is Learoy Spofforth, a name well known to the people of my country and abroad. Only last year I won the American championship at lawn tennis for the second time, and this very year I captured the English championship at Wimbledon also. Everybody has read of what the reporters called my "lightning service" and my "thunderbolt drives," though less attention has been given to the careful thinking out of tactics, the watching for the weak points in an opponent's game. In my year of triumph, my disastrous adventures began—that tiny but wonderful world of Kilsonga, its amazing people and its fantastic wars!

Soon after the tumultuous reception that greeted the victorious American team, and weary of thronging crowds, I called on Charlie, my brother. The worship of men in the mass can be very tiring.

Charlie was greatly changed from what he had been when I had last seen him several years before. Then he had been rather plump with full, round cheeks and thickish lips, a careless, cheerful manner; but now he was hard and lean; his cheeks were sunken and his lips were thin, tight lines. But in his eyes was the greatest change; they had an air of being wider open, intense and full of fire. It was not

until I had been with him for some time that I noticed that he was growing bald.

I chaffed him on his thinness, remarking that he looked as if he also had been in hard training for tennis playing.

"Brain work, Lea," he answered, laughing, "gets a man down if he overdoes it, you know. My doctor made me take a rest. But what you say about too much public worship annoying a man I agree with. I've had my share of it, you know!"

We were dining at Charlie's home at the time, and my wife, formerly, as everybody knows, Mary Winifred Forbes, the noted woman long-distance swimmer, was deep in conversation, about dresses, I believe, with the quiet little woman who was Charlie's wife.

"I was forgetting that we were fellow sufferers," I replied. "I saw the reports in the papers of your discovery. 'American scientist invents microscope to see atom,' they said. 'Declares there are men on atoms. Hopes to establish communication.' Whole columns of it. Then the next day umpteen scientific Johnnies were writing to say that it was all wrong, and that some of your results were probably faked. I thought to myself that you were cutting a bit of a dash, getting some of the limelight, as it were. Tell me about it."

Charlie's brow clouded. "Jealousy," he said, "one meets with it even in our scientific world, especially when an unknown man hits on something really extraordinary. I blame the papers chiefly, though; they seized on the sensational part of my work and made the most of it—took hardly any notice of my microscope at all until I was foolish enough to drop a hint about finding living creatures on atoms, and then they were full of it. I couldn't say a word without it being twisted around to mean something else. I can tell you I soon began to wish I had said nothing about men on atoms."

"Has it harmed your reputation?" I asked, sympathetically.

"Has it!" he exclaimed with smothered bitterness. "No one will pay any serious attention to what I say now. I am the

man who tried to get a lot of cheap publicity by broadcasting mad stories of what he could do—the man who brought science into disrepute!"

A hard case, I thought.

"But there is some solid foundation behind all these stories, I suppose?—something you could prove and make them admit it?"

"That's just it," he exclaimed in such a shrill voice that Mary looked around at us; "it's all true, every word of it—every word the papers said, yes, and more!"

I took a sip of port and tried to collect my thoughts.

"Every great discovery, nearly, has had to fight against prejudice at first," I tried. "If you can prove your words—" Platitudes I know, but it was all I could say.

"Would you help me?" he asked, sharply.

"But what could I do? I am no scientist."

"That doesn't matter. Will you join me tomorrow and take part in an experiment to prove to the world that I am telling the truth? I need somebody, and it would not really be fair to ask, say, a gardener; it's really too dangerous. Besides, I must have somebody to whom people will listen."

At this point he broke off, seeing that Mary was listening, and we began to talk about something else, leaving his question unanswered.

● After dinner he asked me to follow him; he led me into another room. I expected to see his laboratory, but there was nothing suggestive of experiments here, and we went through the open French windows onto the lawn. From here we followed a gravel path through the grounds until we came to a very new long brick building. It was at the back of the house and very well tucked away, in view of its size, for I think it covered more ground than the house itself.

One end of this great barn had been used by gardeners as a repository for flower-pots, spades, plants, and the like. In the center of the building was a ma-

chine that looked to me like one of those rotary printing presses that turn out our daily newspapers, but without the white rolls of paper. It was big enough.

"What do you think of my microscope?" asked Charlie.

"Where is it?"

"That's it, in front of you."

I gasped, for "that" was this huge affair, about five times the size of a street-car.

"Why do you want so much water?" I asked, as I tripped over a leaden supply pipe four inches through.

"That's not water; that's my power cable. You see, we have a very difficult thing to do; we have to magnify and amplify light and alter the wave-length all at the same time and without distortion. It is because they think it impossible to do so that they won't believe me. My system is in its infancy as yet, and extremely wasteful of power, but it works, as you'll see. Here," he pointed to two armchairs with black linen boxes in the seats, "is where the observers sit and see what is going on on the atoms. Those boxes fit over their heads."

Whatever doubts I may have had as to Charlie's ability to do as he said, the sight of these formidable preparations dissipated them.

"By all means, I'll help you," I said, "providing that it's not necessary for me to learn to operate this colossus. You know I never could study anything. What is this little machine at the back of my chair?"

"Oh, you'll learn what that is for quickly enough. If I told you now, you might get the wind up. Let's go back into the house. I don't believe in night-duty."

"Neither do I," I answered, laughing, but in my heart I was very uneasy.

CHAPTER II

Sights Never Seen Before

● "Been showing Learoy over your old laboratory?" demanded Charlie's little brown-haired wife when we found the two women in the drawing-room.

"We've had a look at the microscope," he admitted.

"There you are," she exclaimed to Mary, "as I told you. This is what I have to put up with; Charlie spends all of his time poking about there, and it's the hardest job in the world to drag him away, even when I throw a party. Don't you let him persuade Learoy to bury himself there too." But she did not look like a neglected wife.

"No fear of that," said Mary, laughing, "my husband never could stick to one thing long, unless it was tennis. Why, when I was teaching him golf—"

"Woman," I said, severely, "there are hidden deeps in my nature that even you do not suspect!"

"You've got to show me! But what is this I've been reading, Charlie, about your finding men and women on atoms? I always thought atoms were much too small."

I resigned myself to what I had been trying to dodge, a scientific lecture, but as a matter of fact, Charlie could put things so simply that anybody could follow him.

"It's no new idea, really. When atoms were first described, people noticed how like they were to little solar systems, small bodies whirling around a central sun; but the quanta theory and relativity and a lot of other things have shown atoms to be such complicated affairs that those older ideas were given up. An atom became a sort of dance of protons and electrons; but my microscope has added such a lot to those ideas that the orthodox scientists refused to accept it.

"Can you imagine our sun to be a mass of protons all fused together, in which mass the sunspots are disrupted electrons?—while out in space electrons whirl around it like great electric storms?—while this earth is part of a proton that accidentally got torn to pieces?"

"No," said Mary, "I can't say that I can imagine that, not unless I had plenty of time to think it over."

"Well, anyway, that is what my microscope shows me—"

"Oh, Charlie, you must show me these funny little creatures on your atoms! I'm sure they must be the funniest little things out!"

"I certainly have seen some very peculiar things, and I have also seen some horrible ones. But I wouldn't care to ask you to come and make observations with me; my machine is far from perfect yet, and it sometimes takes hours to get it adjusted so that atoms can be seen. One day I'll fix up a relay with a television screen in the drawing-room, so that you can be playing bridge and when I find something particularly interesting, I'll ring a bell, put out the lights, and throw it on the screen."

"That would be charming, especially if one were trying to make a hopeless contract. But why can't I see now? Learoy is going to."

She had heard, or guessed. Charlie gave me a quick glance and explained that I was only going to watch him work for an hour or so tomorrow.

"Tomorrow! But the Polkinhornes!"

It was an engagement I had forgotten.

"Oh, tell them I'm unwell. Tell them I have a sick headache after the excitement of our arrival. I never did like the Polkinhornes much, anyway."

* * *

Early the next morning there was a tap on my door and a housemaid informed me that Mr. Charles Spofforth had rung up to ask what time he was to expect me. I sighed and told the girl to connect up the telephone in my bedroom.

"What do you want at this ridiculous hour?" I asked him.

"I've been ready and waiting for you for over an hour," Charlie responded.

"Good Heavens, man! Have a little consideration for the aged and infirm! Don't you go to bed at all? All right, I'll be along as soon as I can."

My overnight apprehensions had vanished, and I felt I was going to have an exciting time. As a matter of fact, Mary was already up.

"Really, you're disgusting, Learoy," she said. "As soon as you are out of training, you seem to go all to pieces. You ought to be out playing golf this fine morning."

"Woman," I replied, "you make the same mistake as my brother Charles; you take life far too seriously. To please you and the American public I have played this game of tennis until it has ceased to be amusement and has become hard work. Now that it is over, I demand my right to relax. Believe me, the secret of success lies as much in the ability to relax as it does in hard work. These apostles of physical fitness never achieve anything great; they lack the power of resting; they go stale."

● It was no use starting before lunch now, declared Charlie when I got there, so I ate with him. Arriving at the barn, we found a man in greasy blue clothes fussing about on a sort of platform on the microscope, at the top of an iron staircase that bore the words "DANGER! High Tension." Several electric motors were humming and sparking importantly away, and lamps gleamed away in the mysterious recesses of the machine.

"All set, sir!" said the mechanic, hearing our steps. He did not look around.

"Well, keep it so," said Charlie. "We are depending on you absolutely today. I may not have another chance to speak to you, and any failure on your part may be more serious than you imagine."

The mechanic made a noise of injured dignity.

Charlie and I took our places in the armchairs. I was surprised to observe that he was trembling with excitement.

"See this thing here?" he asked, indicating the machine I had inquired about the day before. "Know what it is?"

"Am I likely to know what it is?"

"It's a memory transferer."

"Uh-huh?"

"When we locate a man on the atom, I shall close this switch, and immediately all his memories will be transferred to you!"

"Eh, that's a weird sort of thing to do to your only brother. Why should you want to?"

"You're not afraid, are you? It's what I wanted you for. Our memories are independent of our material bodies, and don't you see that you will obtain, in a flash, everything there is to be known about the atom and living conditions on it?—the greatest experiment ever made!"

"All right; I'm in your hands. Proceed. But I shall breathe more freely when it's all over, I'll tell the world!"

Science lately has taken such strides that it all seems to me more like black magic than anything else, and there was a gleam in dear old Charlie's eyes that I did not like. Had he been working too hard, and had his reason tottered under the strain? I remember thinking so, but I had promised to go through with it.

He fitted so many contrivances over my head and shoulders that I was almost afraid to move for fear of breaking something. Under that black cover, of course, it was quite dark.

"We're off," he said; "watch carefully!"

In a sea of inky blackness a number of pin-points of light of varying brightness stared at me like stars.

"Nuclei of atoms, shining by their own light!" His voice held a note of awe.

It was just the sort of view that one might see any clear night. The constellations were all strange, of course, and the starry specks stood out with exceptional sharpness against a sky of intense blackness.

After about ten minutes of this unchanging view, I asked Charlie when he was going to increase the magnifying power and bring them a bit closer.

"Doing all I can, impatient," he answered. "This is the tedious part of the business, finding individual atoms. At the present moment we are racing across the sub-microscopic sky at a terrific speed. Do you see one star getting brighter than the others? Watch it carefully."

It was a bluish body, and picked itself out of that starry background to rush upon us with menacing speed, swelling and growing brighter as it did so.

Have you ever stared out of the window of a moving train until it seemed that the train was still and the ground poured past you? I felt something like that now, as though the whole laboratory, Charlie's machine and my chair had melted away to nothing, and I was some ethereal being floating in a vast abyss of space, among those brilliant bodies. I forgot how small they really were and how huge I was in comparison; and when Charlie spoke, his voice was that of some all-powerful entity, booming and reverberating through unthinkable distances.

That great blue sun swerved in its course and passed on the right. Then I waited again until another blue star rushed upon us, swelling to great size, then passed as the other one had. These great suns Charlie picked out of the sky, examined, tossed carelessly aside.

"No planets to either of those," observed my companion. "I think we may have better luck with this one; its yellow color shows that it is not quite so hot."

Steadily the chosen star came on until it appeared much as our own sun does to us, and one could not look straight at it. Around it flared a huge and glorious corona such as men on earth can see only during a total eclipse. As Charlie hunted for planets that might be the abode of life, the sun began to dance about, to travel in erratic spirals and to disappear on the left, reappearing on the right.

This business of searching for planets proved a more tedious business than even the hunt for likely-looking stars. Planets were dark bodies when we got on the wrong side of them, and even when we saw them, we couldn't tell them from the stars in the background until they were very close. Planets we found, but they were either too hot or too cold, and at least an hour passed before Charlie found the characteristic crescent shape that proved to be the body we sought.

CHAPTER III

My First View of Kilsona

● The sudden rush as we plunged after this new planet made me tense all my muscles and grip savagely on the arms of my chair. So unprepared was I that it was not until afterwards that I realized that the movement was entirely illusory, and felt rather foolish about my momentary start.

As we approached this world, which I was later to know so well as Kilsona, it somehow seemed to get beneath us, and we dropped down towards it as though we were falling out of the sky. Below us was a sea of curling, white-topped waves that beat angrily on chalky cliffs.

"I wish you wouldn't do it!" I exclaimed, sharply.

"Do what?" he asked in pained surprise, but I heard him chuckle.

"Put the wind up me like that. For a moment I thought I was going to be drowned in that sea or smashed on those cliffs!"

Excitedly he laughed, a laugh that had a note of triumph in it. "Think of the thrills you're getting! Why, if you were paying good money to be excited, you'd think it an excellent show."

Without further remark, we left that stormy sea and sped over a wide landscape. It was as though those dreams one has of flying freely through the air, more effortlessly than a bird, had come true. We swept over that changing landscape, sometimes at terrific speed, sometimes slowly to examine something that caught Charlie's eye. Round us were fleecy white clouds and below were extensive green prairies, sandy deserts, brown forests, and snow-capped mountain ranges. Charlie was looking for towns, airplanes, roads, railroads, or any other signs of human habitation, but he found none. Animal life there was in plenty.

We hovered over what seemed a fertile place, a wide plain bounded in one direction by hills through a gap in which flowed a river. As I looked, I thought Charlie had chosen well; if there were

any men here they would be sure to come to this well-favored spot.

Now a painful flickering of the scene began to hurt my eyes; there it all was, pleasant and luxurious, apparently in late spring, with green grass, golden-brown woods, and yellow cattle; then—flash!—the river was in flood, cattle gone, grass withered, and great areas of forest burnt and black—flash!—and the river was ice, and leafless trees held up their black stems above a carpet of snow.

"The sudden changes," explained Charlie, "are due to the difference between time as we perceive it and as it is understood down there. Years there are little more than seconds to us. My machine takes a view like a snapshot, holds it a while, then takes another. Ah, that was a man then. Dash it, I was so busy talking that I missed the opportunity of making the transference. Be ready for it, because I shan't have time to warn you."

Indeed, quite a presentable man had appeared, walking swiftly across the plain, clothed in a sort of pink bathing suit with what might have been a bow and a quiver of arrows on his back. I often wonder if some sixth, occult sense warned him of the danger he so narrowly escaped of having his thoughts, his very soul snatched out of his brain, and did he flee in sudden terror from that place? With our next view, he was gone.

Until now I had not thought seriously about Charlie's wild talk about transferring memories. First let him show me a man on the atom, then let him talk about wild things like that; but now the atom with the men on it was indisputably before me. Charlie had accomplished what I thought impossible; might there not also be something in that other mad project of his?—or had his incredible accomplishments gone to his head? And supposing Charlie to be right, what would it be like to have another man's thoughts suddenly injected into my brain? Would my head burst like an overfilled bladder? Should I, myself, be able to sort out Leary Spofforth from that other mind? But I had gone too far to turn back now.

● With the fateful moment hanging over my head, I found myself waiting with a sort of sick apprehension, and hoping the man we sought would not appear.

A silvery yellow airplane—it was obviously that in spite of its unfamiliar form—lay wrecked on the grass, and nearer to me a man lying on his face had raised himself on his elbows to peer at it through the branches of a shrub. I noted that his body was muscular, without clothing and covered with green hair, and that his arms were very long and his legs very short. In fact, though I call him a man, it would have described him almost as well to say that he was a green ape—a creature half man and half brute, like our own remote ancestors of prehistoric days. All these details I noticed in the brief second before all went black.

Until now, remarkable as my experiences had been, there has been nothing to put an unfair strain on the credulity of the reader. We live in an age when the wonders of science are so commonplace that such a microscope as Charlie's would occasion little surprise outside of the scientific world which would understand what it meant. But what I have to tell now is beyond all human experience; it is astounding, altogether beyond credence, if I had not myself experienced it. For in that moment when all had gone blank before me, Charlie had pressed his switch.

I think I screamed, for it seemed as though an explosion took place in my head, a great burst of light, a swirling as in a maelström, and I had a sensation of being sucked through a small opening, like water going through the waste pipe of a bath. For long minutes I hung in an empty space where there was no light, no sound, no sensation; all was formless and vague. At last I opened my eyes.

I was lying on my face on sandy soil and peering through a strange bush at a wrecked yellow flying-machine.

No longer was I merely looking at an atom; I was actually on the atom, on a speck of matter so small as to be invisible under ordinary conditions.

This tragic accident, though I hate to say it, was Charlie's own fault. He must have failed to make proper experiments to ascertain the effects of his 'wonderful machine,' and it must have been much more powerful than he had suspected. For in transferring the personality of the cave-man to me, he forgot the corresponding reverse action, the transference of my personality to the cave-man! I was on the atom, in the body of an ape-man, while the savage was in the laboratory in my body!

I heard, long after, from Charlie's own lips, a brief account of what happened in the shed after he pressed the switch. At the same moment, he took off his viewing-box and turned on the light, for he was nervous of the results of his action. Hearing my cry, he jumped up and snatched the apparatus from my head. There was, of course, no apparent change in me, but when he looked into my eyes, Charlie knew that something was wrong; for those eyes stared at him in a dull, animal, bewildered fashion, like the eyes of an utter stranger, and without intelligence.

A horrible chill must have run down my brother's spine at the sight. Had he destroyed my mind, and was I now a mere body without conscious life, a living, breathing hulk with no soul?

At that moment the savage, who had been crouching in the chair with terror in his eyes, emitting a peculiar cracked cry, leapt at Charlie and swung a fierce blow at his face; but the blow was wild, and Charlie, easily avoiding it, knocked the brute unconscious and clapped the box over his head again, setting at once to work to bring back my proper personality from the atom. For he now knew what had happened. Though this appeared to be Learoy before him, it could not be; it must be that other, savage creature. And Learoy himself was on the atom, in the form of a green-haired cave-man, and unless he were very quick, he would have lived through his life-span in the quickened time of the atom. To do any good, Charlie must act in a very few

seconds, yet how was he to find Learoy, and how, when he found him, was he to tell him from any other ape-man running about? He stared helplessly down at the atom, and the landscape of the atom stared blankly back, years passing by—*flick—flick*—as he watched.

Meanwhile I was a new inhabitant of the world of Kilsona, and had first to accustom myself to my new surroundings. It must not be supposed that I knew at once where I was, or that my thoughts were at first any clearer than those of a man who has just received a heavy punch in the solar-plexus.

The human mind does not take in any very startling thing in a flash; however definite the evidence of the senses, it takes a little time for the new idea to be built up in the mind, and for associations to group themselves around it. If a hungry tiger suddenly appeared in a man's bedroom in, say, Fifth Avenue, that man would not scream and run at once; he would stare at the tiger and, though it looked like a tiger, sounded like a tiger and smelt like a tiger, he would wonder who had put on a tiger-skin to frighten him, or whether it was a new kind of pet dog, or whether he suffered from an optical illusion. But if, on the other hand he had heard a rumor beforehand of a dangerous tiger having escaped from a circus—well, things would be very different. (Practical jokers please note.)

Thus, when I found myself lying on that hard, uneven ground, I became aware of a gnawing hunger in my stomach and felt a cold wind beating upon my body; I was for a while absolutely bewildered. Although the added clearness of the view might be due to Charlie's handling of the microscope, how could that account for my actually feeling myself there, even to the extent of being furiously hungry when I had lunched less than two hours before? Was it a dream?—because such changes often occur in dreams.

Looking down, I thought the savage was lying beside me. There was his arm, covered with green hair, immensely long and powerful and with cruel talons. In-

stinctively I shuddered and drew away from it. *It was the beast arm that moved!*

Then I had a spasm of terror. A glance showed that my other arm was also green-haired and bestial, that my body was the body of an ape-man. I sat up.

An explosion occurred on the grass to my left—such a queer thing, an explosion on the ground with nothing to cause it. It left a considerable hole and a puff of sulphurous smoke. The pain of the small fragments that struck me came a moment later.

Another explosion occurred to my right, and with it came a hazy, bewildered realization that somebody was shooting at me. What had I done that somebody should try to blow me out of existence? Hastily I laid down again.

I now saw that the position chosen by the green ape-man had been selected because of the shelter it gave. As long as I lay flat, a ridge in the ground protected me from the front, and by lifting my head, I could see without showing myself. A few moments sufficed to show that the danger came from the wrecked flying-machine.

- Near my left hand was an object very like a revolver with a short barrel. It looked heavy, but to the powerful muscles I now possessed it was but a trifle. Pressing the button that seemed to do duty for a trigger, I was surprised at a small cloud of blue smoke that sprang into being near the point I aimed at. Apparently, then, the man or animal whose body I had taken was in the act of carrying on a sort of private war with the occupants of the wrecked machine, and if I were not careful I might be made to suffer for his misdeeds.

Just then a cry rang out, or rather, a roar. While it was not remarkably loud, not even as loud as I could shout at my loudest, it was very deep and harsh; its note was below the range of the deepest human bass voice, while its harshness was a quality to set one's teeth on edge and make one sweat with fear. For it was obviously a war-cry designed to express vio-

lent passions and to fill a foe with terror. At once it was answered by what I took to be an echo, then another and another till dozens sounded at last, seeming to come from scattered shrubs all about me. That landscape, seemingly deserted, was yet teeming with vindictive life.

"Korsho gah!" The cry was quite close to me and distinct from the other sounds, as though someone had asked a question. I turned my head to see a green ape-man, such as myself, hiding behind a bush and watching me with small, bloodshot, widely-separated eyes. Looking around I saw many such figures, all with heads pointing towards the glassy yellow flyer; the place was thick with them, but Charlie and I had taken their bodies for clumps of grass.

"Korsho gah?" The speaker sounded impatient. That was not the actual sound, but is as near as I can express it. I knew now that it was addressed to me.

Somehow the words struck a cord in my memory, for Charlie's machine for transferring personalities is not perfect; it left fragments of the old personality behind. Thus the ideas of the cave-man were present in my mind as a sort of dim background, vague memories to which I must trust if I were to live through the dangers of this strange world. That cry, "Korsho gah?" meant "Are you hurt?"

It was a relief to know that I already had a friend, anyway. I barked back a word that sprang into my mind as meaning no in the language of the savages, and tried to follow it with a short, confident laugh. What I actually did was to emit a timid little war-cry of my own.

Immediately afterwards I must have caused my new-found friend to doubt my word, for I dropped my head on my arms in an effort to concentrate on the remains of the ape-man's memory, so as to find out what was happening here, and why. That glassy yellow ship must hold the key to the problem.

Cautiously I peered at it. It was almost as transparent as glass. In fact, if it had been in the air, I should probably not have noticed it at all. The denser parts had

a peculiar yellow sheen. It was not very large, perhaps twenty feet long and six from the ground to the upper deck; its cross-section was the shape of a hexagon. The upward tilt of its prow and stern made it very suggestive of a banana. It had short, broad wings, propellers and rudder, and one could pick out the outlines of engines and other opaque objects within. It had apparently landed heavily on its nose, the front parts being shoved in, but the boggy nature of the ground it had struck, and in which it was now embedded, had saved it from becoming a complete wreck.

As I watched, a sort of hatchway opened, and the savage cries broke out again as a woman ran out onto the deck—and such a woman! Her slim figure had no trace of brutishness but might almost have belonged to any graceful, cultured woman of our own world, except that it was perhaps rather *too* thin and delicate. But for all her civilized form, she presented a strange enough figure as she ran out onto the deck of the damaged vessel; she had orange-yellow hair, several inches long and so stiff that it stood straight out from her head like the quills of a porcupine; her eyes were big and round, with heavy lashes and pencilled brows; her nose was very small and of perfect shape, a remark that also applies to her slightly full and *blue*-painted lips. Blue paint had also been applied to her cheeks and breasts, so that she gave the impression of having been shaped and painted according to a rather childish idea of beauty; in fact, she gave the impression of a beautiful savage. For clothing she had a small red garment around her waist and hips and sandals on her feet, nothing more; yet her body was less sunburned than one would expect.

CHAPTER IV

I Attempt a Rescue

- Most of the details I have given of the appearance of the woman, Issa, were visible to the very keen eyes of the ape-man as he lay there behind his clump of

shrubby and stared at her, but others I have added from later knowledge.

Now the sight of her affected me strangely. It is hard to express, but it must be remembered that I had to do my thinking with the brain of a savage, a brain that was full of violent, undisciplined emotions. I mention this lest I be accused of not acting and thinking as a married man should; the brutal force of that brain, on which the mind of Leary Spofforth was only thinly imposed, like a veneer,* was too powerful for me to control; in fact, the war between the two was, for years after, to be my chief difficulty on the world of Kilsonga.

I saw that woman then, and I wanted her, even as, horrified at my own feelings, I strove to control myself, to fight down the idea. Action, vigorous action was the only way to work off that hideous energy in my own mind.

Plainly it was my duty to help that woman who, mentally and physically decadent though she might be, was yet a civilized being beset by brutes. Yet, as soon as I showed myself to her, she had clearly indicated that she would shoot me down.

A haze of blue smoke surrounded the wrecked flyer, blue smoke that was the same as I had produced when I tested the weapon in my hand. It was to get above this smoke that she had exposed herself so recklessly, and stood now on the very highest point of the stern, outlined against the glow of the sky. Blue puffs appeared in the air about her and settled down to join the cloud that now nearly reached to her feet. The savages intended to capture her alive, with what purpose I knew only too well.

How was I to help her? To get up and run forward would be madness; she would kill me with her explosive bullets before I got halfway. The obvious plan was to turn my weapon on the others around me (I had found a switch that caused my pistol to produce explosive pellets), but not only did my soul revolt

from such a series of cowardly murders, but also reason told me that it would simply be suicide and would not help the beleaguered woman a jot. These others must certainly be far more expert in the use of these strange guns than I was.

Somehow I must get to her, offer her assistance. But the ground near the vessel was bare of cover, or else the ape-men would already have taken advantage of it. The only means of getting closer to her than I was already was by the river, which flowed between high banks to within a hundred feet of the damaged nose of the ship. If I could get to that stream, swim under cover of the bank, I could crawl out on the edge of that patch of marsh, and then it might not prove impossible to run the last little bit and get on the ship by means of the nose, which was embedded in the ground.

The same plan had occurred to others, for an ape-man slid noiselessly into the water and swam, as a dog swims, towards the woman. I could follow his progress under the water, never once coming up for air, until he crept cautiously out and joined a group of his fellows, sheltering behind a low mound quite close to the vessel. There were about eight of them, and the woman, her back to them, seemed wholly unconscious of the danger they represented in her rear. Every moment I expected them to make a dash.

I must make myself a member of that group, and as quickly as possible. The girl's shooting was poor, otherwise she would have killed me when I unwittingly exposed myself; probably if I got up and ran hard, I could reach the river unharmed. But would the water put my strange pistol out of action, leaving me defenseless?

● While I was thus undecided, another ape-man slid into the stream, and I saw that he first put the gun inside his huge mouth, then swam all the way under water.

Glancing at my own hands I saw that they were webbed like the feet of a duck, showing that I had been turned into a

* A thin wood, used for covering.

being who was well at home in the water.

Hesitating now no longer, I jumped up and ran. What a shock it was to find myself, instead of my accustomed five foot ten, little over five foot tall, due to my squat body and short legs, and my hardest efforts at running carrying me at not much more than a brisk walking pace over the ground! The way these savages traveled over firm ground was to place the palm of one horny hand on the ground and swing the body sideways, pivoting on each arm in turn like a man pole-jumping. In this way they could, on a plain, achieve a speed not much inferior to that of a thoroughbred racehorse. However, I was right about the girl, for, in my hasty, stumbling progress to the stream, she made no effort to harm me.

Setting my teeth against the shock of the cold, I plunged into the clear, deep water in the middle of the stream.

I struck out confidently in my usual swimming-stroke, for I am a strong swimmer, thanks to Mary, my wife, but to-day I found myself unusually awkward. Instead of the arms and legs of Learoy Spoforth, I had the limbs of an ape-man, and when I attempted to swim in the frog-like fashion of a human being, those unaccustomed limbs betrayed me. In spite of the powerful muscles and the webbing on the fingers and toes, I soon found myself sinking—in actual danger, in fact, of drowning. Soon I could no longer keep my head above water; the long weeds at the bottom wrapped themselves around my legs, and I gave myself up for lost.

It was then that I began to find out the unusual powers of this brute-like body of mine, for as I realized the uselessness of struggling and let myself sink, being dragged through the weeds by the steady current, I was not in any distress for want of air, did not even want to breathe. It was long afterwards that I found out the reason for this; in that flat world with its frequent floods, nature had adapted all creatures to avoid death by drowning, nearly every land-animal having two capacious bladders of pure oxygen near the lungs. These bladders contained enough

of that vital gas to supply my needs for nearly an hour.

My eyes were open, and I saw a thing like a foot-long gray lizard rushing to attack me. Instinct saved my life, for I promptly flashed out an arm and caught him by the back of his neck in a grip that, to my surprise, crushed him. It was well that I did, for his bite would have been as deadly as that of a cobra.

Wondering why I had not thought of it before, I began to swim as a dog swims, and to take full advantage of my webbed fingers and toes. At once I tore loose from the weeds and forged ahead through the water—almost as completely master of the water as though I had been a fish. Drastic my descent in the animal kingdom had been!

A few moments later saw me crawling out of the stream, trailing long stems of weed, to join my fellow ape-men behind the mound. My gun was lost somewhere at the bottom of the river.

They were not pleasant company, being far from clean, and the breath of one who turned to me was foul. Strange to think that while I shrank from them, I was probably in no better state myself.

The semi-naked girl on the yellow ship seemed still ignorant of our presence there behind her; the blue gas was now over her head, but she took no notice of it, a fact at which I wondered until it occurred to me that she could probably hold her breath for long periods, the same as I could. The time seemed ripe for a dash, for once the ship was gained, there was a convenient rope by means of which one could hoist oneself on board. To get there I should have to run across a patch of swamp in which pools of water, coated with red scum, alternated with clumps of grass or shrubbery. There were snakes, lizards, and an anthill many feet high, as well as many other insects and reptiles.

If I stopped to think about danger, I should not have nerve enough to make that dash. Accordingly, I set my teeth and jumped up and ran. How was I to know I was practically committing sui-

cide? I had picked out a route across firm patches that seemed to offer security from sinking in the slime.

I was on a strange world, and a world full of dangers of which as yet I knew nothing. Our world, this earth, is a very safe world; many generations of men have fought and millions have died to make it so. In some places men may have to beware poisonous snakes, tigers, bears, and the like, but these dangers are few, limited to certain places, and the dangerous animals are usually timid and of low intelligence—so that I gave the swarming life of that swamp scarcely a thought in making that dash. As I sprang forward, standing almost upright, yet going on all fours, so short were my legs and so long my arms, I became aware of an activity among the snakes, of a stirring among the ants. Another lizard struck at me but missed.

● Instinct warned me of my dire peril;

I was aware of it as an uncontrollable spasm of terror that set me racing my hardest for the comparative safety of the ship. Like something forgotten and remembered I knew that all these myriad things were dangerous, most of them poisonous; some could even squirt poison out of their mouths with such force as to pierce the skin several feet away; the majority were vindictive, and all had some measure of intelligence. And I was invading their domain, trampling on their homes! The reason why the girl on the wreck had not even troubled to consider the possibility of attack from behind was now only too painfully clear to me.

Looking back on that mad rush, I am forced to conclude that the only thing that saved my life, in spite of several attacks, was the fact that the air of the swamp was already polluted with the stupefying gas with which the ape-men were attacking the girl, the wind blowing from the ship in this direction and carrying wisps and streamers of gas with it; this may have rendered the reptiles slow and torpid of movement. Fortunately I avoided the anthill by a wide detour,

otherwise I should certainly not have survived.

The rope looked thinner than I thought, but I had to trust to it. Throwing my weight on it, I pulled myself up; I pulled myself up, calling as I did so words that came into my head as meaning, "I come to help you."

It would have been better if I had said nothing. How, under the circumstances, could I expect her to believe me? I was to her one of the enemy, and as soon as my head appeared, she fired point-blank at it. In the same position, I myself would have expected treachery and done the same.

Again I escaped only because of the blue gas, which had now so nearly overcome her that her hand wavered, and the tiny but shattering missile missed me, but still was so close that I was all but stunned by the force of the explosion. Dazed, I lurched to my feet and rushed at her before she could fire again. At the last moment I remembered that the normal grip of my arms would break her fragile bones, and pushed the weapon aside instead of seizing her wrist.

Dropping the gun, she ran down the sloping deck past me towards the prow of the ship. In instant dismay I understood; thinking herself captured, delivered up to a fate worse than death, she was going to throw herself to death among the ants, lizards, and scorpions of the swamp! She had courage, real courage, that girl whom I had thought decadent. I jumped after her, threw my arms around her, and pulled her back to safety without gripping her. I felt her warm flesh and the silky texture of the red garment around her hips. Turning wildly, she beat upon me with her bare fists; yes, with arms hardly stronger than those of a child of ten she thumped and hammered on the leathery skin of a green-haired ape-man!

And strangest of all, she was winning that weird fight; for, in the moment when I saw her rush for the fore part of the vessel and knew her purpose, I had gasped with dismay, and in gasping I had forgotten to hold my breath, but had

drawn that stupefying gas deep into my lungs. My head seemed to swell to a huge size, and all things about me began to grow misty and faint.

CHAPTER V

I Acquire a Relative

● Fantastically, there appeared in the air before me an ape-man with a wide grin on his features. He landed on the deck with a plop, and forthwith others appeared beside him to gather around the girl, now lying unconscious on the deck, and growl deep, excited conversation which, to my surprise, I understood every word of; for my mad assault on the ship had been watched by many eyes which had interpreted it even as the girl herself had done. Seeing me get aboard and struggle with their victim, they thought the battle won, and forthwith came charging out of their hiding places in that peculiar, pivotal run I have described; reaching the ship they put their hands to the ground and, throwing themselves upwards with a sort of leap from the arms, landed on the deck with ease. My attempted rescue had been a signal for a general assault!

Had I been capable of doing so, I might have stood and fought from sheer humiliation when my brain had sorted out my surroundings and I knew what had happened; I might have struggled to death in defending beauty against brutal force, and in doing have left beauty to her fate. I did strike hazily at one, but my dizzy blow was so ineffective that he did not even look around.

There were no questions asked; the ape-men had caught their quarry, and now all they wanted to do was to get away from their own blue gas as soon as they could. The girl was seized by her wrists and ankles and hurled over the side of the vessel; watching her fall, I saw her neatly caught by others on the ground, who began to carry her away.

One of the ape-men was gruffly asking whether I was capable of getting down and walking without assistance. His interest in me seemed strangely out of place,

and it also annoyed me. As a matter of fact, the kindly solicitude these monsters sometimes showed to each other was one of the few marks they retained on their human ancestry; they were not so thoughtful for the other half of the race of mankind on Kilsona, of whom the captured woman was an example. Of the two branches it was hard to say which had sunk the lower—Issa's people or the green ape-men.

I refused his aid, fought to pull my reeling senses together, threw myself over the side in imitation of their easy leaps, landed awkwardly, and set off after the main crowd in a clumsy attempt to copy their swinging pivotal strides.

It was a strong, healthy body I possessed, that of a male not quite full grown. When I became accustomed to this peculiar method of travel, I soon found myself catching up with the main body. One heavily built fellow seemed to be looking for someone, for he threaded his way through the others, then, seeing me, he growled, angrily.

"Blasted young fool! Ought to have your head bashed in!"

For a moment I was surprised, uncertain whether to submit to this bullying or not, then my blood rose and I growled in answer.

"Perhaps *you* would like to bash it in?"

"That I would, you young devil!" he shouted.

It seemed to me that all the others were watching to see how I behaved in this crisis, that if I submitted I should become the butt of numerous bullies. Accordingly I swung at him a furious blow.

With astonishing agility he swerved and avoided my stroke. It was well for him that he did, for my claws, which I had forgotten, would have given him a ugly wound. But he made no attempt to hit back, behaving as though astonished.

"Kastrove," he exclaimed, "would you strike your own father?"

● Kastrove was my name. I now recognized the man who spoke as the same as he who asked whether I was hurt when

the girl fired at me, and who had offered to help me away from the wreck. The possibility that Kastrove might have friends or relatives here had not occurred to me. At once I saw that here was someone who, handled carefully, might be very helpful to me while I was on Kilsona. Probably he would show me my way about, and help me avoid running unwittingly into danger, perhaps show me the best way to set about rescuing the captive girl.

I mumbled an apology for the attempted blow.

"All right," he said, freely enough, "but your hasty ways will get you killed before your time. Never did I see anything so mad as your rush across that deadly marsh, or your single-handed attack on the ship that the best warriors of Graypec were afraid to approach. Where's your gun?"

At that I remembered the strange weapon that produced the puffs of blue gas, now at the bottom of the river.

"Lost it," he scolded, "and carrying it to-day for the first time! How can you expect to be made a hunter and warrior when you can't even look after your gun? Someone will have to stay with you and look after you. I don't know what the sub-chiefs will say."

He gave me a sharp, penetrating glance.

"I suppose you wanted that yellow-haired woman from Teth-Shorgo for yourself? Mad young fool, you should leave such to older men; at your age the women of your own tribe should be good enough for you. I could point out several who would be willing to come into our cave if you were not so full of conceit. Still, you caught her, and none can deny your right to her. If it wasn't for this business of losing your gun, I don't know how that will affect it."

I pricked up my ears at that. Had I unintentionally won a right to the girl? I was torn by conflicting feelings. I wanted to remain faithful to Mary, but in that brief moment when I had held the struggling girl in my arms I had been

aware of a passionate desire for her. I was in love with her. My wife seemed a far off, distant person. And, anyway, that was not the immediate problem; the thing on which I had to concentrate for the present was to find some way of getting the girl away from the clutches of these brutes, help her to get back to her own people. For people of her own kind there must be, somewhere. I, myself, would be glad of more civilized company. Now if I had, in the eyes of these brutes, any claim to the prisoner, then that would help me in any effort to save her from them.

"Then she is mine?" I asked.

Throwing me a scornful glance, he replied: "After you, the only one of my ten sons still living, have risked losing your life and breaking your old father's heart, you pretend you don't know of the right you gambled for. Certainly she is yours, for one day only. After that the chief warriors will decide among themselves whose she is to be."

After that we said little, but continued along the wide trail in silence. For my part, my mind was in such a whirl that I was almost dazed, as can be imagined, considering the unexpected way in which I had been pitchforked out of my own world into that of Kilsona.

The ape-men numbered about two dozen, and I gathered that they were returning to their home, which they called Graypec. This was the tribe of Graypec. We had not been traveling very long before we came to a steep hill. It was an outcrop of sandstone. There were many round, dark holes in the face of the cliff, and ape-men and women moving about in front of them. Then these men were actually cave-dwellers, I thought, remembering how I had first thought of them as cave-men. I felt I was learning fast.

The hill had alternate layers of sandstone that was fairly easy to burrow into, and stone that had had more clay in it when it was formed, and was consequently much harder. These harder ridges stood out like steps, and the caves were

arranged in rows between them. Steps led up to the higher caves, and where it was very steep, ladders had been fashioned out of saplings and bound to shrubs growing out of the rock.

● The company of cave-men poured into the open space in front of the caves, and, with grunts of satisfaction, sat down on the ground and fell to devouring the meat that hung roasting over many fires. My father doing likewise, I remembered my hunger and resolved to build up my strength before I did anything else. Accordingly, I picked up a piece of meat and began to gnaw. It was burned in one place and underdone in another, and parts of it were gritty where it had been dropped in the sandy rubble, "screes," I think, is the word, at the foot of the cliff. But I was not disposed to be critical; I found it excellent.

A big fellow came up to me while I was eating and grunted, "Good work, youngster, capturing the yellow-hair; but you must be less foolhardy. The chief frowns on such rashness." Then, sharply, he added, "Where is your gun? You know the order: sleeping or waking you must always hold it in your hand, your mouth, or your feet."

"Don't be harsh with the boy," broke in my father, "he dropped it on the yellow ship when half conscious from the effect of the gas."

"What?" cried the big fellow. He seemed too astonished at the terrible nature of my offence to speak, as though he knew of no words to do justice to the matter. Finally he barked, "This is too serious for me to deal with. The chief himself must see you. You will be lucky if he does not kill you."

As the big fellow lurched away on his short legs, my father went on servilely munching at the thigh-bone in his hands, for between us we consumed many pounds of meat; then, when quite sure the other was out of hearing, he murmured to me.

"That fellow will get himself knifed in the back one day. Couldn't deal with you himself! Any other sub-chief would have

given you the choice of losing your right to the woman and losing your status as hunter and warrior for half a year. And the chief made him sub-chief less than two moons ago! Ah, give a fool authority and he loses his head." So saying, he hid his face in the greasy meat again.

For a while we employed ourselves with filling our stomachs and lubricating our faces and hands. It was plain that I had an awkward hurdle to face if I had to interview this chief. My knees were shaky at the thought. Conscience was worrying me, too. What I ought to be doing was looking for the prisoner and telling her that I was ready to help her; but so strange was everything here to me that it was probable that my help would be more harm than good to her, as it had been before.

"Now none of your foolhardiness when you see the chief," observed my companion, presently. "Curb your pride and temper, and take his insults meekly, otherwise your old father will lose his last son. I've been before him myself; he bellows and roars. Let him do all the talking and pretend to be afraid of him; that's the best way to manage him. Curse it, Grawtok has lost no time. Here comes the chief's personal servant."

Grawtok was the name of the sub-chief who had reported me. The messenger threaded his way carefully among the fires and the gorging cave-men who moved out of the way for him, and approached us. Curtly he announced that I was to follow him to the chief. "Now don't forget," rumbled my companion as I was led away.

CHAPTER VI

In the Chief's Cave

● The chief's residence was on the ground floor, as it were, a sort of verandah in front of the entrance, around which a crude effort had been made by means of carving and pigments to make the rock look like the head of a dragon. Into the mouth of this dragon we went. Inside, a guard sitting on his haunches rose and opened a massive iron gate.

I found myself in a large room around which I glanced curiously. Nothing that I had so far seen of the cave-men of Graypec had prepared me for what I saw here; I was expecting some rough place with a vulgar, showy splendor, but here were all the marks of a civilized being, one who knew the meaning of comfort and even luxury; at least, that was the impression it made on me, a stranger who had only the crude exterior of the place to base his judgment upon.

The floor was covered with a thick carpet of woven grass, soft and springy to the feet, and the walls were polished to a high degree of smoothness with fairly good pictures of flowers and animals hanging on them. There were a table and two chairs in what is called the rustic style, cleverly made, and a third chair was upholstered in blue cloth and looked quite inviting. But the feature of the room that was most startling of all was the one I noticed last; a globe of frosted glass was set in the ceiling and filling the room with soft light. What kind of man could this chief be? One does not expect the home of a cave-man to be lit with neat electric lights.

I had been puzzled by the fact of these primitive creatures using such effective weapons as the one I was charged with losing, a dangerous combination of savagery and civilization; but here the problem became much more striking. Where, for one thing, could the current come from for the lights? Should I find modern dynamos and turbines here?

My guide indicated that I was to enter a small room opening off the large one, a room that was bare save for a hollow scoop in the floor and filled with water. After I had waited alone for several minutes, my guide entered again, but stopped short on seeing me.

"Get in and wash yourself, filthy creature," he snapped. "It would be an insult to the chief to enter his apartments in that filthy condition. Hurry, he is waiting!"

This still further convinced me that the chief was no ordinary cave-man, but really

I had been rather stupid in not guessing why I had been left in such an obvious bathroom. Without any regrets I stepped in. The water was tepid, contained soda, and there was a piece of strong soap and a brush, so that in a few minutes I got myself about as clean, probably, as any cave-man of Graypec ever was. There was a bar of solid gold set in the wall, but when I touched it, I got a sharp electric shock. I suppose it was put there to frighten the simple savages.

After shaking myself as a dog does, the only means of drying, I was ordered out and directed to follow my guide once more. He led me through two rooms and a passage, all lit just well enough for me to see that they were all furnished with strange fittings that I was full of curiosity to examine; but when I touched a chair in passing, to feel its texture, a sharp, "Hands off!" made me snatch my arm away.

"No further!" I stopped and looked around.

It was a large room, dimly lighted, and with nothing but the absence of windows to suggest that it was underground. The ceiling was rounded, and I suppose the poor light was intended to give it an air of mystery. On the walls were life-like paintings of fire-breathing animals, men with bat-like wings or with the heads of reptiles, and other designs intended to over-awe simple minds, like the sculptures of heathen temples. There were also dummies of nightmare creatures, dummies that startled one by suddenly moving or cackling hoarse laughter, as though at some secret joke. On the richly carved table were two vases from which poured lurid vapour shot through with varying colors. In the poor light the effect of it all was eerie enough; but I looked for the wires carrying power to the mechanical figures, and found them; I listened for the scratch of the needles on the records producing their voices, and heard them; I looked for the wires carrying current to the colored lights hidden in the vases, and I saw them. Naturally, none of these things frightened me.

• I was beginning to guess the answers to the questions that had been puzzling me; this chief of the cave-men of Graypec could be no savage ape-man himself; he must be a man of knowledge and intelligence who used his superior wisdom to keep these savages in subjection. That would explain their guns; he must have provided them. And if there was one civilized man on this world, there must be others, like the captive woman. But why, then, should this civilized chief allow his savage followers to attack one of his own kind?—the "yellow hair," as they called her. It could be explained only by supposing that the chief was a traitor, a renegade, hostile to the rest of humanity—probably some outcast criminal seeking vengeance for imagined wrongs and using the ape-men as tools. As a matter of fact, this guess was wrong, but it was near enough for my purposes at the moment.

The room had been built in the shape of a round tunnel, always the best shape for an underground space, and the walls and floor had been added later. That meant that there must be spaces left behind the walls under the floor, where machinery, and perhaps men, might be hidden. On looking closely, I saw several concealed peepholes through which somebody might be watching me now.

Motioning me into a rough seat facing the table, my guide fiddled with the sides of the chair. Alarmed, I tried to break away, but I was too late; he had clamped a strong metal bar across my chest. Next he tried to fix my wrists, but I refused to allow it.

I heard a faint click as though some hidden person had closed a switch; and in sudden fear I tried to tear my body away from the chair. But it was impossible to escape from that brass bar, and that strange current began to work its will on me. It could not have been electricity as we know it; it had the curious effect of rendering me incapable of movement. I could not raise my arms or my legs; all I could move was my head. A peculiar numbness crept over me. The attendant

padlocked my helpless arms to the chair and left me.

An ape-man in that position would probably have been in a state of pitiful terror. I was absolutely helpless; all I could now move were my eyes and mouth; even my neck had gone rigid. I could feel nothing of my limbs or trunk, neither warmth nor coldness nor the dampness of my bath, nor the hard seat under me. It was as though I were a head without a body, yet I was wide awake. I was capable only of looking straight ahead, and of my body all I could see was just my knees and my toes. It was as though my body was dissolved in that swirling vapor, shot through and through with shifting colors; a savage would have thought that this was what had actually happened, and when, later, the current was turned off, he would imagine that, by an act of remarkable generosity, his body had been re-created for him out of its elements.

The door closed behind my guide, and I waited for the mysterious chief to show himself.

Now almost filling the room, the weaving smoke thinned as though swept aside by a strong draft. Then, where had been empty space a moment before, appeared the figure of a man.

He was a middle-aged man, fat and overfed, such a man as hundreds one meets in any modern city. He had fat cheeks, a broad nose and bulging eyes, and was dressed in a simple purple robe that hung from one shoulder and reached to his knees. He was glaring at me with concentrated ferocity and making passes through the air, for all the world like some fat uncle at some children's party, fondly imagining that he looks terrifying. For a moment I had a struggle not to laugh, but perhaps he thought I was only making a grimace of terror.

And the next moment I was in terror, yes, in actual fright. Because, you know, there was nothing there! I could see the nightmarish paintings on the walls and the mechanical dummies clearly *through* his body. He moved and, in the conven-

tional way of ghosts, passed right through a chair.

Then he vanished into nothingness.

Sweat I couldn't wipe away ran into my eyes. The smoke thickened, and something big moved away from in front of me. Then I knew how the conjuring trick had been worked, for it was nothing more. Everybody has looked into store windows and has seen objects in the street reflected in the glass, in the same way the man I had seen had been hidden from me while I had seen his reflection on a sheet of glass in front of me. The lights had been carefully arranged so that none of them shone on the glass, and in the duskiess one could not see the sheet at all. He himself stood in a very bright light, and when he turned the light out, his image vanished.

● Under cover of semi-darkness, the sheet of glass was moved away. Then the atmosphere cleared again, and the real man stood before me, his arms folded and a sardonic leer on his face.

"So you are promoted to the rank of warrior and hunter," he observed, slowly, "and the very first day that you carry the thunder-tube only a warrior may carry, you lose the sacred weapon you should guard with your life. Do you realize the harm you may have done? Suppose, before rust makes it useless, it were to get into the hands of some intelligent animal! You would see your comrades falling one by one, shot from ambush."

In this the chief spoke the exact truth. To me it was the most astonishing thing of all in that strange world, Kilsona, that if, say, a lion, a tiger, or a wolf, were to pick up a fallen gun, he would examine it and would be quite likely to find out how to use it. Yet was it so strange? After all, we train animals to do things almost as clever, and the standard of intelligence in the wilds is always improving. Steadily our competitors creep up behind us; what terrors may await our descendants if we fall behind in the race!

"You think," went on the chief, "that your madness has given you a right to

this woman. You have lost that right and your status as warrior as well. The woman shall be mine."

He opened a door and called, and the captive girl, with her mop of stiff yellow hair, walked slowly into the room. It was the first time I had really observed her closely, and I thrilled with admiration of her grace and courage. For, slight as she was, slender as a reed before the bulk of the flabby brute who grinned at her with greedy eyes, there was no fear in her bearing. Without posturing, she met his gaze with cold disdain. From him she turned to look at his weird pictures and dummies, and I saw his eyes flash with anger at her half-smile of contempt at these absurd gee-gaws. Then she saw me and recoiled; and I was hurt, for I had forgotten that I was to her a repulsive savage.

Slim and straight she stood and looked the chief steadily in the eyes.

"Whatever your ambitions," she said, for she spoke in the tongue I understood and her voice was calm and distinct, "and whatever means you may use to further them, at least you are still a man. You would protect a helpless woman from these brutes."

He took her motionless face in his hands.

"Trust me," he said; "I will see that they do not harm you."

"You will return me to my people?"

He took a step towards her, but she stepped back so that his arms fell to his sides.

"Now, my pretty one," he urged, "do be reasonable. You know the cruel law of your people: death before capture. They saw your machine fall, know of your fight. Return to them and they, knowing that you had been alive in the hands of my warriors, would destroy you and wipe all mention of you from their records."

Her eyes fell in shame. "You have your servant here," she muttered, glancing at me, "to thank for my sin in being still alive."

"Yes, he has his uses," agreed the chief, "but he has also disgraced himself. Now by the law of my warriors, yes, I made it myself, any one of them who is responsible for the capture of a woman of Teth-Shorgo has the first right to her."

She answered not, staring at him with contempt and fury.

"Your mate," he said, indicating me with a mocking smile.

Hearing that, I would have sprung at him and torn at his fat throat, but I could do nothing; my greatest efforts made no effect on the strange influence of the ray that kept me helpless.

"You see," went on the bully, "why he was so brave, and now that I have seen you, I understand him. But so beautiful a lady need not be handed over to him if I say not; neither need you be returned to your own folk to be slain, so full of youth and vitality. Look at him and then at me, and choose between us!"

Her voice wavered not; neither did she flinch.

"Between the man who has sunk so low as to betray his kind," she said with bitter, icy distinctness, "and the sub-man who knows no better than to behave as an animal," her words now were shrill and fast, "*give me the cave-man!*"

She had all a woman's natural cleverness in saying things that hurt, in striking where pride or vanity were greatest; but I am certain she did not mean what she said.

But the effect on the man was all it was meant to be; her insulting reply dashed the confident leer from his face, leaving a sickly, dazed expression. Then came anger, the overbearing anger of a man who is not used to having his will thwarted. His face congested with fury, he struck at her, punched with all his weight and without the slightest regard for her sex or fragility. As she crashed to the floor and lay still, I was at first quite sure she was dead.

And all the while I had to sit and look on, unable to move.

CHAPTER VII

The Fights Among the Cooking-Fires

● He kicked her unconscious body; then, catching my eye, he strode at me in such a rage that I thought he was going to kill me for witnessing his humiliation; but, when already menacing me with an iron club he had snatched from one of his mechanical figures, he checked himself. Dropping the weapon, he snarled.

"No, you can live cub. To hand her over to you and the others is the best punishment for her. Let the tribe take her; I care not what happens." With that, he turned and vanished through a hidden door in the wall.

I found myself able to move again and staggered from the rough seat, only to fall awkwardly to the floor. For several minutes I was in agony as I fought to bring my body back to normal life.

Of the madman who apparently sought to set himself up as a sort of God, there was no sign, nor could I see in the much-painted walls the door through which he had gone. I was relieved to find the girl still breathing, and seemingly suffering from nothing more than severe bruises. As I looked at her, one arm above her head in futile attempt at defense and blood on her mouth from a cut lip, looking like a sleeping child troubled with bad dreams, a delicate creature born to an easy life, I felt the greatness of the handicap of being on a strange world, utterly ignorant of my surroundings. Perhaps in my efforts to prevent one evil I might cause greater ones; though I am not usually a religious man, I prayed silently to God for guidance, to enable me to tell right from wrong. Somehow I felt comforted, less burdened with responsibility.

The attendant entered, apparently with orders, for he gruffly told me to help him and picked up the unconscious girl. Carrying her between us, like a feather in our powerful arms, we shuffled on our short legs through several rooms out into the light of the moon, for the sun had set.

Most of the fires were out, but those that remained glowed redly. For the most

part, the ape-men had retired to their caves, but many remained in the open around the fires, sleeping uneasily after over-eating, or squatting on their haunches, or shuffling slowly about.

At the sight of us, there burst forth a series of guttural yells at which the sleepers all jumped to their feet, ready for danger; then seeing no cause for alarm, they allowed their eyes to become bleary with sleep again. But none of them lay down; all came crowding around us, poking with long fingers the flesh of the girl as she lay on the ground and began to open her eyes.

The attendant announced curtly that the prisoner was handed over to the tribe, then went back to his master's cave. The chief trained his servants well.

A dozen hands lifted the girl and carried her to the light of the fires, on which others were now throwing armfuls of small wood to produce a bright blaze. It sickened me to see such a fragile being in the hands of such unclean brutes. I felt I must make my stand to save her; it seemed it must be now or never. Would my supposed right hold good now that she had been given to the tribe by the chief, for the use of all, as it seemed? I must assert that right to save her from these others, whether it would still hold water or not.

"I claim this woman!" I cried, in a voice I tried to make as fierce as possible.

Few heeded me. I called again, louder: "I claim this woman by right of capture!"

There were bursts of laughter, derision, but I went on shouting until they listened to me.

"Be silent, cub," growled one. "You are no longer a warrior."

"You have lost your right," snapped another.

"The woman is mine by right," I belatedly, unable to argue but determined to stand my ground.

"You are behaving dangerously, infant," observed a huge, immensely powerful fellow, not unkindly.

Grawtok pushed himself forward, the

sub-chief who had caused me to be taken before the chief.

"By the rota of sub-chiefs," he declared, "I am next on the list. She is mine."

"She is mine," I maintained, not without some sinking at the heart.

● Without a sound he pivoted on his left arm, the knife from his ankle-sheath sweeping high in his right. Totally unprepared, for the distance had seemed to me much too far for such a blow, he must have struck me to the heart, had not a heavy, hurtling body knocked the arm aside. It was the man who claimed to be my father.

"Let the boy alone," he growled.

There was a gasping intake of breath from the onlookers, who forgot the girl to crowd closely around us.

"By order of the chief," cried Grawtok, trembling with fury, "it is death to strike a sub-chief, except in self-defense."

"And that law," snarled back my defender, "allows of one exception only, the case of a father defending his son!"

(Throughout my stay on Kilsona I found father-love remarkably well developed among all the higher animals.)

"Such is the wise law of the chief, to prevent the weakening of the tribe by the slaughter of the defenseless young by bullies. You, Grawtok, are a bully; the tribe is weary of your overbearing ways. I challenge you to combat!"

Gone now was servility, rage taking its place. He had courage, that supposed father of mine, for Grawtok had at least a fifty pound advantage in weight besides a much longer reach.

"By the law," growled Grawtok, "I need not fight; I may report you for punishment for defying my authority. I appeal to the other sub-chiefs present."

He called them by name, and they came sulkily forward, three massive cave-men. It was plain that Grawtok was not popular with them. For a few moments they conferred, then the biggest of all, the phlegmatic fellow who had warned me I was behaving dangerously, voiced the opinion of them all.

"It is true Grawtok need not fight if he does not wish to, but we consider he has now his personal status to think of. He has been called a bully, and we remember occasions when he has been accused of cowardice. To our knowledge, he has never given proof of the falsity of these charges; we consider that, in this case, if he wishes to keep the respect of the tribe, he would be wise to win it by the force of his arms."

Grawtok's eyes opened wide with astonishment, and I heard gasps of surprise from those around. Afterwards I learned that this was the first occasion when the select body of sub-chiefs had failed to support one of their number against one of the rank and file.

"I will fight," snarled Grawtok with a look that made me tremble for the courageous man who had come between me and danger; "we will fight with our knives." He held, point foremost, the foot-long edged weapon from his ankle-sheath.

"One knife each, only," said the spokesman.

The combatants circled each other warily, taking deep breaths to insure a good supply of oxygen for the effort that was to come; each kept his eyes fixed on those of the other, and the palm of a free hand on the ground, for the slightest wavering of either, the least relaxation of alertness, would be a sign for the other to whirl upon him.

For a full minute it was a conflict of wills, a slow creeping around, each waiting for the other to drop his eyes or make a false step; then, so quickly that I could not follow his movements, Grawtok sprang. For an instant or so in the swirl of green arms and bodies, I could not see what was happening; then I was aware that the other had avoided him and was himself springing.

Grawtok's arm deflected the blow aimed at his throat, a red gash appearing on his forearm; then the two bodies were locked together. Each held the other's knife-arm by the wrist and sought to loosen the grip on his own arm. Back and forth they struggled, neither gaining the

advantage, until my father suddenly jumped, seizing the other around the middle with both his legs. Backwards he went and they rolled on the ground, Grawtok on top, but it was obvious that, for all his greater weight, the pressure on his abdomen was causing him considerable distress.

There was a short knife in Grawtok's left foot, and with it he stabbed at my father's side. It was an action hidden from most of the on-lookers, and I saw the distress in his opponent's face.

I jumped forward, shouting. "Grawtok fights unfairly; he has two knives!"

Seizing the limb that held the weapon, I dragged it back into the light of the blazing brushwood, that all might see. Hands gripped me, and there were confused shouts of, "Stand back, cub!" while others said, "There is truth in what he says!"

● Strong arms dragged Grawtok off his victim, my father making game efforts to rise and continue the battle but collapsing. The spokesman of the sub-chiefs thrust the second knife under Grawtok's nose, demanding, "What is this?"

"He produced it and struck at me," declared Grawtok, "and I wrested it from him."

"He lies," I cried; "I saw him take it from an ankle-sheath!"

The spokesman folded his arms and looked grim.

"Cub, all this trouble is of your making. Now you accuse one of us of a crime for which death by torture were the only just punishment. You must fight, you and he whom you have accused, and may the God of the Lightning, whose priest is our chief, give victory to he who speaks truth. But, by the law, when a warrior fights one who is not yet a warrior, and not instructed in the use of weapons, they must fight with bare hands only."

I could not have been suited better, for, though Grawtok was twice my weight, I flattered myself that my skill in boxing would hold him off. What little I knew of these ape-men!

Both of us had our sheaths taken away

to prevent further fouls, then Grawtok hurled himself on me like a Catherine wheel. I stood in what must have seemed to them a curious attitude, upright, left arm and shoulder foremost, trying to adapt my boxing experience to these unaccustomed limbs. As he came on, I measured the distance and struck out with my left, drawing back my right and tensing every muscle in my body as I did so, putting all my strength into one terrific blow.

Probably they had never seen a straight left before. Full in the face he caught it, all the weight of his ponderous hurtling body adding force to the blow. It was like hitting a brick wall, an impact calculated to fell an ox. The violence of it nearly broke my wrist, shook me to the heels.

Yet he came on. Incredibly, impossibly he came on, blundered on and gripped me around the waist with his taloned arms, tearing blindly at my flesh. Had he not been half unconscious from the blow, I must have died in the first few seconds under his hands, while I stood motionless with astonishment. Then the fighting spirit of the cave-man came uppermost; the pain of those rending claws brought me to myself, set me tearing with my smaller arms at his back, all thought of method of fighting banished in red rage that sought only to wound and tear, to destroy before I myself be destroyed. Our bodies were slippery and clotted with blood.

I found myself on the ground, underneath, Grawtok seeking to reach my throat and tear the arteries. I forgot to claw, and struggled only to defend my throat, while he concentrated on reaching the vital spot. Slowly, inevitably, his enormously superior weight was winning; soon one of his paws was at my throat, but still I was able to prevent his using it for a while.

Until now it had been the green ape-man that struggled for life, but now, with death near at hand, I had a moment of calmness and remembered Learoy Spoforth. All the resources of my two personalities were combined in that last effort, before all was blotted out.

His other arm, the one at my side, was bent at the wrist, palm towards forearm. I remembered a ju-jitsu trick whereby the hand is bent, palm towards forearm; it was a simple-looking hold I had been shown long ago, but yet it is one of the most painful in ju-jitsu.

With a sudden twist I seized that arm. He, concentrating on the other, heeded not but took the opportunity to secure a grip on my throat. As I put on pressure, his grip relaxed; he howled with pain. As a rule, these men fought to death without a sound; but I showed no mercy, for my life was in the balance; I pressed until the joint snapped and Grawtok's body went limp.

CHAPTER VIII

Issa

● Dizzily I got to my feet, Grawtok lying as one dead. There was no move from those around, the cave-men waiting either for Grawtok to rise and continue the battle or for me to slay the helpless brute.

"Good work, boy," said my father.

It surprised me to see him, for I had thought his wounds fatal; yet he stood there grinning broadly and, though plastered with blood, seemingly almost as well as ever. As a matter of fact, his injuries had been lighter than I had supposed, and the power of recovery possessed by these men was astonishing.

Then I looked at Grawtok and gasped. For the first time I saw the effect of my punch; his nose was smashed and the front part of his face partly pushed in, blue swellings making the rest of it almost unrecognizable. Yet he had fought on! I felt a new respect for the vanquished brute.

"Are you satisfied?" asked the spokesman. "It is at your option to slay him or to take your chance of his vengeance when he recovers."

"Let him live," I replied. Grawtok was now a pitiful object, sitting up and moaning feebly. The spokesman bent over the fallen sub-chief.

"Either," he declared, "the cub is a tremendous warrior, or the God of the Lightning did indeed give him strength. He strikes, and his foe looks as though a rock had fallen on him. He grips, and behold!"

He shook the injured arm, showing how the broken joint allowed the paw to flap helplessly about, heedless of the fact that Grawtok screamed and fainted again as he did so.

"Cub," he said, "you are not a warrior, yet I proclaim you the greatest fighter in the tribe!"

I would rather have been without this distinction, for, in the event of my being challenged for the "title," I was by no means confident of being able to get another such hold, my knowledge of ju-jitsu being of the slightest; but I could not help smiling at the delighted way my foster father preened himself on hearing these words.

Then I remembered there was something still to be attended to. Ah! the girl. I asked after her.

"She is yours as long as you want her. The women are taking her to your cave."

I was some seconds grasping the full meaning of this; then I saw that my object was won. I should be in a position now to protect her. What passed between us in the cave the others need not know; they would be at liberty to assume what they liked. Quickly I looked around and saw a ribald group of women dragging the captive roughly towards the cliff.

"Handle her gently!" I directed them, sharply. They stopped and stared at me, huge females nearly all of them bigger than I.

"Carry her yourself, whelp!" snapped one, giving the captive a blow that knocked her spinning, to fall at my feet. I wished now I had not interfered, for I had no idea which cave was my own.

Though I whispered to the girl that I was her friend who would protect her in every way, still she refused to heed, and, as I bent to pick her up, she turned on me and, all restraint gone in her despair, sank sharp, white teeth into my arm. A

cackle of laughter sounded from the women. Again I spoke soothingly and tried to pick her up, but again she beat me off. It is a difficult thing, however strong one may be, to take a woman where she does not wish to go, especially when one is being careful not to cause pain.

I felt that I was making a fool of myself, but again my foster father (where should I have been without him?) came to help me; he picked the girl up by the legs, and I carried her by the arms, so that we managed her between us easily.

"Where are you going?" he asked sharply. We were before a cunningly hidden hole in the rock that I had not noticed. Passing inside we found ourselves in a small, rough imitation of the chief's burrow, with heaps of herbage as the only furnishings and lighted by dim lamps in the ceiling that never went out, but which left most of the place in gloom.

● My companion closed a heavy bronze gate across the entrance, bolted it with bolts that could not be reached from outside, and we shuffled in together. Breaking from us, the captive crouched, trembling, in a dark corner.

We were in a roony cave, set well back in the rock, yet there must have been some outlet for the air, for it was quite fresh. Rather fearfully I looked around, half expecting some cave-woman to come forward and claim me as her husband, for I was both anxious to avoid such caresses and worried as to the reception of the new-comer. But fortunately I was saddled with no such encumbrances.

A thick-set female shamled forward, her eyes fixed in a hostile stare on the prisoner, and spoke gruffly to my father, who indicated me. I assumed this to be my mother, but as a matter of fact it was about her tenth successor; for marriages among the men of Graypec were on the same plan as the matings of wild creatures, usually lasting for one year only, from spring to autumn. They soon tired of each other, and when there was a child it would be brought up by the father to be a warrior if it were a male, but if it

happened to be a mere female, little interest was taken in it. As a matter of fact, these girls inhabited caves of their own, and their wants being few and always attended to as the duty of the tribe as a whole, they got on quite well under this peculiar system. It certainly made them hardy and independent. No male, however, could be quite sure who his mother was, nor could any female know either of her parents.

The present mate of my father, on learning that the strange woman was mine and not a rival for herself, took no further notice of her, nor of me. The two settled themselves at one end of the cave and went to sleep.

Gathering myself a heap of herbage and pushing another towards the captive, I tried to make myself comfortable. I felt absurdly embarrassed, for I had no idea what to say to her; besides, she naturally credited me with those motives I had thought it best to assume. How to clear her mind of this idea, I knew not; and even if she were capable of understanding the incredible way I had come to this world, the simple speech of the cave-men would never find words in which I could explain—beyond which my civilized personality had conceived a decided admiration for this brave and very beautiful woman; yes, though I hate to admit it, I was in love with her. And that brutish personality was striving to control me. Mary was a very distant person to me as I sat in that cave, streaked with blood from my recent fight.

We sat in silence, I perplexed and divided against myself, she tense like an animal about to spring.

"Several times," I tried at last, "I have assured you I mean no harm to you. Why do you not believe me?"

"But you are a cave-man," she murmured at last.

I was making some progress. She had spoken to me.

"I seem to be a savage, but I am not." I fumbled desperately for words. "I was a man, but now occupy the body of this brute."

"Transferred personality?" she gasped. "Is it possible? It is said that in the days of man's greatness, thousands of years ago, before humanity split into separate streams, when one man could speak and the whole world hear, when the world was so ruled that only in a few places was it necessary to carry arms, long, long, before the coming of the Larbies, that learned men could transfer the personality of one man to the brain of another; but it was never perfect. It resulted in the two personalities warring in each of the two brains, and any attempt to reverse the process often resulted in confusion. Is it possible these wonders of the forgotten past can be repeated in this weary world today?"

● So rapidly did she speak that it was as though she talked to herself, not expecting me to follow. Her mention of the "learned men" of an earlier day on Kilsona made me think of Charlie, my brother. It was the first time since the accident that brought me here that I had had time to think about him, and of my other relatives and friends now so far away. I could not bring myself to blame poor Charlie for what had happened. Should I ever see him again?

The exchange of personalities meant that, even as I was here in the shape of the ape-man, Kastrove, so was that savage in Charlie's laboratory in the shape of me, Learoy Spofforth. What damage might he not do there! Perhaps he might make a sudden, murderous attack on Charlie, or damage some delicate part of the machine; then there would be no more hope of my getting back. The more I reflected, the more impossible it seemed that I could ever get back. Barring miracles, I must resign myself to spending the rest of my life here on Kilsona. Perhaps life here might become bearable when I was used to it.

My problem of explaining myself was already partly solved, yet I lay still with nothing to say. What could I say? I was like a new-born child.

"Then your fight," she said at last,

"was not to win me, but to protect me?"

"You saw?"

"The women held me, made me look, told me you were fighting for possession of me." She shuddered. "I hoped you would win, you looked so small against that monster, but when you came to pick me up, I found you were so big and terrifying that it seemed you could not be the same man. What town do you come from?" Her voice changed as she spoke, the last words being snapped at me so sharply that I started.

I tried to say, "From another world," but the nearest I could get to it in that language was, "From another place," waving my hand vaguely upwards.

"What town?" There was tense suspicion now in her voice.

"Another town, far away, up. A very long way up, among the stars." The problem of making it clear was beyond me; she stared at me as a rabbit might at a snake.

"A planet? But all the other habited planets were abandoned, ages ago. Who would stay on them when life was so much easier here? The secret of interplanetary flight has been lost for thousands of years."

She jumped to her feet, eyeing me with loathing. "You lie! I believe you are a transferred personality, but you are from no other world. You are from Gorlem, the only place where men could possibly know how to do such things. You are a spy!"

Bewildering world! She was in the grip of some overpowering emotion that caused her, forgetting how completely she was in my power if I chose to use it, (a situation not of my choosing) to hiss and snarl with venomous hatred.

"I will scream!" she declared. "I will denounce you to the tribe so that they will tear you to pieces!"

Pulling my reeling senses together, I countered: "And would they heed your cries? Remember the circumstances under which we are thrown together here."

Like a pricked balloon, she collapsed. "It is true. To unmask one of the com-

mon enemy, but to be helpless because of this absurd internal strife! Yet," her voice rose to normal, "you do not kill me, or even harm me. I do not understand. Ah, I know? you are torturing me, keeping me in fear and doubt!" Hopelessly she stared across the cave.

I was near to losing my temper, for I had been through much that day. "It seems you are determined not to believe me," I declared. "I know nothing of your Gorlem, but am weary of talking at cross-purposes. Leave me to sleep." Saying this, I laid down and tried to rest.

Curled up like a cat, it was long before I slept, for the events of the day and the problems they raised kept milling around in my brain, growing ever more puzzling as my brain became duller with sleep and my headache fiercer. Twisting and turning and several times rising to rearrange my grassy couch, every time I looked I saw the captive woman sitting in the half-light, motionless, her eyes fixed on me. At last I slept, for I dreamed that I was tied down and that she bent over me, murder in her glance.

There was a sub-stratum of truth in my dream, for I felt the lightest possible touch on my ankle. Instantly the automatic response of hair-trigger nerves and muscles jerked me wide awake, made me jump to my feet, ready for combat, one hand holding the hand that had been stealthily drawing the dagger from its sheath. One advantage of short legs was that one could get up very quickly.

Facing me, her eyes running with tears at the pain of my unconsciously strong grip, was the prisoner.

"So you would murder me in my sleep," I reproached her.

She spoke not.

"Why will you not believe me when I say I mean you no harm? How can I convince you?"

Her face downcast, she shot me a glance of sombre misery. "To me, personally, you are good; but you are a man of Gorlem, a sworn foe of both branches of humanity. As a man, I respect you, but as a member of that community, I

hate you; for you seek the destruction of my kinsmen, and of all the rest of mankind. Under the orders and directions of the Larbies, we must fight."

Picking up the fallen blade I handed it to her, hilt foremost.

"Take it," I said. "If I closed my eyes so that you could strike me to the death if you wished, would that convince you I am not your enemy?"

CHAPTER IX

I Go Hunting

● Unwillingly, she took the keen steel blade she had taken such pains in her efforts to obtain secretly. It seemed to fascinate her.

"Come close; hold it to my throat," I invited, but she held off.

Closing my eyes, I laid down; but, as was only natural, I watched through narrowed lids.

Like one in a trance she came towards me, blade foremost. With most agonizing slowness and hesitation, she advanced until I felt the point resting against the flesh. A slight movement now of that razor-edge, and my life-blood would come spurting out, splashing a full fifteen feet away under the force of my heart-beats, draining my body in a few minutes.

Five, ten seconds I waited, frozen, not breathing, every muscle taut. Then I knew she would not strike; she had hesitated too long.

"You are a spy, but I am a traitor," she moaned, dropping her arm. "I cannot do it."

Her nearness was an intoxicating thing, flowing through my veins like fire, overwhelming all reason, all self-restraint. I threw my arms around her.

"You are beautiful," I gasped, hoarsely.

If ever I was near to death it was then! Her eyes flashed fire and the deadly blade shot up to my throat. But again she struck not.

"Release me, please," she pleaded. "Remember, although you have the mind of a civilized man, you have the body of a

savage, and your embrace is not pleasant."

I let go of her and again I tried to sleep, but got up to ask for the return of the knife.

"I cannot rest while you hold that," I explained.

Refusing at first, when she saw that I was prepared to wrest it from her by force, she tossed it so that it fell on the dried grass beside me. From then on I slept soundly with my hand on the hilt.

* * *

A hand on my shoulder roused me. It was my father. His mate was absent but the captive slept, one arm above her head like a child.

"We go hunting soon." He glanced at the girl. "Be patient and treat her not too roughly at first, and she will perhaps make you a good mate. Son, women are difficult creatures to handle; learning to hunt is child's play compared to learning to manage a mate. Take too little notice of them and they become sulky and bad-tempered; pet them overmuch and they grow spoiled, which is far worse. One's first half-dozen matings are seldom very successful, unless one is wise enough to choose only experienced matrons, as few young men are. I remember my first mate; I was her first man, and we quarreled and fought so that the sub-chiefs parted us after a month, and we both had empty caves for the rest of the year. Taught us both a lesson. Four years afterwards we mated again and got on very well. You see, experience made all the difference. Nobody is a really good husband or wife until the fourth time.

"My second mate—"

While he rambled on in this homely fashion about the peculiar relations of the sexes in Graypec, we left the cave and emerged into the bright day. A sub-chief handed me a weapon similar to the one I had lost.

"Then Grawtok is dead?" asked my father.

"Less than two hours after the fight.

His conqueror takes his weapon," said the sub-chief, turning away.

Though I had seen the broken bone of Grawtok's cheek exposed to the air, and knew that disease must strike at such a compound fracture, I was amazed that it should do so with such suddenness; for on that world, where recovery from terrible wounds proceeded so swiftly—both my father and I were fit again—death could also strike with frightful swiftness. Warriors were pointing me out to each other and saying: "The stripling who slays giants with his bare hands!"

I would have preferred to have spent the day poking about the cave-village—the question of where the electric power came from interesting me particularly—but I was clearly expected to join in this hunt, and so had to be content with exploring the surrounding country instead.

● A group of warriors were ready, and we started off across the plain. There was no stopping for food, for the custom was to eat but one meal a day, and that in the evening. Among the trees we went more carefully, sending out scouts in parties of three, or climbing trees for a sight of game. Although we covered many miles, we never got really far from the village of Graypec, for the boundaries of our hunting-grounds, unmarked but exactly known, were between three and five miles away in four directions. To the north, south, and east were the territories of other tribes, and to the west a belt of barren country lay between us and the sea.

Once I wandered off a little way on my own, and the result was a torrent of abuse from my father. I gathered that it was always dangerous to be alone in the game country, owing to the alertness and intelligence of the wild creatures. Seeing a man alone, they would hurl heavy stones from behind bushes, or big animals would dash out one's brains from behind, or the coils of a huge snake would drop around one's neck and jerk one up into a tree. Very seldom was the victim allowed a chance to cry out; the only safety lay in numbers, for all animals had a whole-

some respect for our guns, and knew that a dead man's comrades would exact vengeance.

When it came to the turn of my father to join a scouting party, I went with him as a spectator, and we pushed cautiously through the breast-high undergrowth. Our movements were cat-like in their stealthiness and silence.

"Where is Teth-Shorgo?" I whispered to my father, remembering the chief's use of the word as the name of the place the captive woman, Issa, had come from.

"A town four hours' journey to the south. I've been there—great cliffs built by men out of rocks you can see through, with people living in them. They say it was a splendid place once, but most of it's in ruins now. Even now, it is said, there are places in it more wonderful than our chief's home; but for my part, I'd much sooner live in a nice, dry cave hollowed out of natural rock than in the most wonderful-looking house with wire-netting in the windows and the roof fallen in. Wild beasts roam the streets on dark nights when the weather is not too hot."

"And when it is very hot?"

"The smells are too bad, even for the animals."

I was shocked. His words ruined my half-formed plans, for I had dreamed of returning Issa to her own people in the end, somehow overcoming the difficulty of the punishment that awaited her there, and even of myself becoming an inhabitant of Teth-Shorgo. And now a few words in that crude language swept all these air-castles to the ground. How low mankind had sunken on this world!

"Won't they send a rescue party to find our captive?" I asked, bringing out an idea that had been in my mind for some time.

"Why should they? They don't care what happens to each other. They are too anxious for the safety of their own skins."

So that was it. I had wondered why the men of the town did not make war on and destroy these hairy brutes of the forests, but it seemed that the real prob-

lem was why the cave-men did not destroy the men of the town.

"The warriors," went on my companion, "would be glad enough to see the foul place wiped off the fair face of the land, but the chiefs forbid it. The numbers of any one tribe are too few for the purpose, and the tribes will not combine. Besides, even the men of Teth-Shorgo have some uses; they make guns and visit Graypec ten times a year to tend the machines that feed our lights. Under the waterfalls they go and get all greasy messing about with the great wheels that roar as they spin. In return we leave their town in peace, and give them meat and fruits to carry back."

Getting bolder, I asked who the men of Gorlem were.

Startled at the word, he looked anxiously around, then muttered in agitated tones.

"My boy, you're asking a lot of questions today. It would be much better for you to leave such problems to older heads; confine your attention to hunting, for the present. It is unsafe to be too inquisitive.

"Nobody knows who the men of Gorlem are, at least nobody at Graypec except the chief. All that we others know is that we are at war with them, for they are trying to conquer the land and destroy all other men. Every cave-village and all towns like Teth-Shorgo yield an annual quota of warriors for the war; they are taken away and never heard of again. Be careful, or you may be one of those to go from Graypec this year. They are never heard of again, and they fight under the directions of the all-wise, all-powerful Larbies."

The last words were almost chanted, the final phrase being uttered in hushed tones of awe. He stood quite motionless, his eyes fixed and without expression.

"And now, silence!" he barked at me more sharply than ever before, and from then on we thought of nothing but the hunting.

A scouting party presently reported that a herd of about two dozen "ollideps" had been sighted, and the news revived our drooping spirits, for nothing substan-

tial had come the way of this group of hunters for three days, and the group was faced with a prospect of short rations if its luck did not change. The older hunters held a conference.

● The ollideps were grazing in a wide clearing with woods on three sides of them, the fourth side being a passage forming a natural bottle-neck. There was no hope of approaching the herd closely, the question therefore being which way they would run when disturbed. On becoming aware of men, they might slip away through the trees and there would then be the tedious job of tracking them, probably ending in their escape into the hunting-grounds of another tribe. If, however, they could be induced to bolt in a panic, they would keep to the open and rush along the bottle-neck, where men might lay in wait among the trees.

Accordingly we split into parties, the main company making a wide detour to reach the far side of the clearing while six men, myself with them, went to the passage along which the game were to be driven.

To my surprise, my companions began to cut sticks in the woods, selecting a certain parasitic growth that ran to great lengths, the stem of which was as pliable as a rope. Trimming off the branches with their daggers, they produced quite serviceable lariats, to one end of each of which they tied a stone. These, and not their guns, were to be used in bringing down the quarry.

Ordering me to keep out of sight, they selected hiding-places that left them room to whirl their weighted stems, then for a long while all was still. At last, looking out, I saw strange-looking animals bounding headlong towards us.

In writing of the fauna of Kilsona, I have used the words tigers, lizards, and wolves, but my readers, (if any) should understand that I mean creatures something like these earthly animals. A naturalist might say that what I call tigers more nearly resembled leopards, or that my wolves were more akin to big coyotes;

but there are no earthly beasts in any way resembling these round, jumping ollideps, except, in some respects, kangaroos. Their bodies like round rubber balls, their little heads set on long, straight necks, they bounded along, their two legs bending under them like springs each time they landed. Perhaps a little bigger than prize shire horses, they could leap twenty feet into the air and had the speed, it seemed to me, of racing autos. The pounding of their feet was like the booming of big drums.

A lariat hissed through the air, wrapping itself around the legs of the leader, who fell with a crash; seemingly unable to check their headlong flight, seven or eight more followed on, and as my companions sent their coiled, weighted stems whizzing through the air, each one brought down one of the heavy beasts. One of the ollideps broke through and fled madly, filling the air with shrill screams.

The screaming and bellowing was now deafening, the terrified herd scattering in all directions across the plain, but those who had fallen lay still, their necks broken. Following on, the beaters killed two more with their guns, but the rest escaped. Our bag amounted to ten, at which all seemed well satisfied.

It puzzled me how the heavy bodies were to be conveyed to Graypec, but the carcasses were skinned on the spot, the waste matter and most of the bones removed, and they were tied with thongs into rough bundles. Two men carried each body and we returned, bloody but happy, to Graypec. We all took it in turns to carry or to mount guard, and being much nearer to the village than I had thought, accomplished the task in easy stages and without excessive fatigue.

CHAPTER X

The Shadow Across the Plain

● These methods, adopted whenever practical, were not always used, as it was not at all times easy to send the game stampeding past an ambush in such a way as to enable the killers to use the lariats.

Then the explosive bullets had to be resorted to, but not only was this regarded as waste of valuable ammunition, but also animals slain in this way were not considered such good eating as those with their necks broken in a fall caused by a lariat.

Hunting was always difficult, owing to the intelligence and alertness of our victims; they possessed a power of putting two and two together that was almost uncanny. Man is the only thinking animal, but here on Kilsona were many animals which could think a little. Man's rule tottered. May it one day totter on earth also? In the wilds, the struggle for existence sharpens wits; domestic animals are comparatively stupid. Brains get heavier and heavier; let man fall behind and perhaps all the advantage he now has may be lost.

About another thousand years, I reckoned, would see mankind on Kilsona extinct; perhaps it would be better so; now that his proud position was lost and a few machines, implements, and crumbling houses were all that remained of his one-time glory.

I found myself wondering why he had fallen. Had it been mere laziness, due to science making life too easy? Issa spoke of two branches of mankind, the cave-men being one branch and her own people of the city of Teth-Shorgo belonging to the other. She had also spoken of the Larbies, whom she, and all the others, seemed to dread. Were these beings the key to the problem? Were they a race of men, or were they mere animals—or was it only the remains of some savage religion?

Who were the "men of Gorlem?"

Why should the chief of the ape-men be a comparatively well-formed man?

These were the questions that puzzled me for many days, and to which I got no answers. Issa became terrified when I questioned her, and my father curtly told me to hold my tongue if I valued my safety. It was plain that our numbers were dwindling, for though food was fairly plentiful, fatal accidents were many. We had many empty caves.

The girl, whose name was pronounced "Ice-ah," became, to all outward appearance, resigned to being my mate. We kept up that fiction, though, in fact, we kept apart, and she mixed with the others on terms of tolerated inferiority. Yet, privately, she still regarded me as an enemy, as though we shared some guilty secret.

Men from Teth-Shorgo, weak, poor specimens of men as I had expected, came to inspect our simple power-plant and took away ollidep meat and fruits in their airplane. While they were about, Issa hid herself.

Between the two races, I preferred the men of the caves. Rough and primitive as they were, they were clever in their own way and had their codes of honor and hated cowards and bullies. Ordinary humanity, forced to live as they lived, would have been much as they were. Their world was so hard, food was so difficult to obtain, and they were so surrounded with danger that their whole lifetime was fully occupied with necessities. They lived for the present, with little thought of the past and less for a future that, unless one kept one's eyes and ears wide open, would not concern one.

They had amazing strength and endurance and great courage. I have told how Grawtok fought on when fatally injured, and father-love was so strong that I saw several fathers plunge into danger to defend their sons, once with fatal results. Hunting packs often did thirty miles of rough going a day, and hunters would lie motionless for hours in prickly thickets, their green skin and hair making them almost invisible.

Their little pistols—I never found out how they worked—had handles, a sort of bulb with switches, and a firing button. They would produce explosive missiles, the stupefying blue gas, or a death-ray. The latter, however, was seldom used, since it rendered meat poisonous. Instantly fatal if hitting a vital spot at twenty yards, it took longer to operate at a distance, though there was no theoretical limit to its range. By peering through what looked like a fragment of green glass

at the side of the weapon, one saw a spot of light playing on what one was aiming at—light invisible to anyone not using a similar crystal. Much as I longed to look inside these guns, I was told that any attempt to do so would result in a violent explosion, and I never had the courage to test it.

● Gradually I became used to being a cave-man, nearly forgetting my past. I have explained how I had been obliged to take Issa into my cave for her own safety, and that I had resolved, while keeping up an appearance of being mated to her, that we should actually remain apart; but in this I reckoned without Issa herself. She had never known in her hard life the kindness with which I treated her, and became more and more affectionate towards me, while I, for my part, was fighting a losing battle, for I loved her. In her simple way she could see nothing to come between us—didn't I like her, she demanded, weeping bitterly. One may keep a resolution for weeks; then comes a moment of weakness, and all one's efforts are wasted. Women get their way with men by waiting for those moments—thus wives bend husbands to their will. Mary Winifred, wife of Learoy Spofforth, seemed a vague, distant figure, and the doings of Kastrove the cave-man to concern her less and less. I must admit the facts; in the end Issa and I became, in actual fact, mates.

She still regarded me as a "man of Gorem," as though we shared some guilty secret she tried to forget.

My curiosity about that mysterious term grew, and I found, after two distressing scenes with her, that she would do nothing to define the term to me. I began to make practice of asking others who these men were, and who the Larbies were, inquiries that produced only embarrassment or rage, according to the individual questioned. I could learn nothing.

Aware as I was of attracting unfavorable attention, I persisted until my father gruffly warned me that the sub-chiefs, and, it was said, the chief himself, had

begun to notice my ways, and that I must desist if I wished to live.

One day, while out hunting, the massive, taciturn spokesman of the sub-chiefs who had taken charge of events during my fight with Grawtok and since then had ignored me, suddenly said: "Kastrove, come with me!"

Astonished, for I had thought him unaware of my existence, I did so. It was a windy day, promising storms, and one could see for long distances. Never speaking, we went together up a steep hillside, up and up, climbing gentle slopes, sheer precipices and boulder-strewn gorges, until we came out into the open and could feel the bracing, salt-laden wind from the sea on our bodies. On we went, over undulating, chalky downs, until the land ended as though cut off at our feet, and far below, at the foot of overhanging cliffs, was the white foam of an angry sea. Below us were little white birds, and above a steel-gray flying ship, shaped rather like the one Issa had been flying before the breakdown that led to her capture, only much larger, sailed quickly and silently by. There were none of the semi-transparent yellow ships that came from or went to the city of Teth-Shorgo, for the weather was too rough for them to venture aloft.

"Cub," said my companion as we lay on our bellies looking out to sea, "raise your gun, press the trigger—no, no, put the lever at 'safety' first, thus—and look towards the horizon through the green crystal.

"So! Now tell me, what do you see?"

I saw nothing worth speaking about, and said so.

"Dolt, look carefully. Search!"

Then I saw it, a conical island, far out to sea, from which shone two pencilled searchlights, wavering and flickering about the sky. To the naked eye there was nothing.

"There they are, cub, the Larbies you are so interested in. Two hours swim from the shore—if you escaped the fishes."

His voice was tense and low, but

whether as a warning or reproof, or whether the distant object caused his excitement, I knew not.

We lay still. A storm-cloud passed over and wetted us; the sun dipped towards the horizon, but we moved not. I thought of the warriors, anxious to return to the caves and impatient for our reappearance; but I had learned my etiquette too well to make the first move. As long as he lay like a carven image, so must I.

At last I heard his voice.

"Cub, there is something strange about you, something I do not understand. I knew it when you dashed past me in that mad rush to capture the yellow-haired woman, and I was sure of it when you conquered Grawtok by means of some art I do not know; for that was not done by sheer strength, neither were you aided by the God of the Lightning, as I declared to the tribe.

"I am old, and these eyes have seen many things that others have no suspicion of. When I see a sign of the science-magic of the ancient days, it is as plain to me as a spark of fire in the dark; and while others wonder, I partly understand."

His huge hands rested on my wrists, gentle, yet holding me as helpless as a new-born babe in his colossal grasp.

"Cub, I am old and near my end. To one so young as you, life seems endless; only one near the end knows how very short it really is. I have lived longer than any other in the memory of the tribe, and I have kept my strength. I could, thanks to my experience, beat any warrior of Graypec now, but in a little while I shall begin to crack up. Then, well there are others jealous of my position, and the chief himself would not be sorry to be rid of one who knows so much. Yes, I know the mutterings of the tribe, in the same way they muttered against my predecessor, forty years ago. I seem to speak of the chief disrespectfully, but I am too old to fear even him; he is but a youngster, the offspring of a cave father and a yellow-haired woman who had been captured by him, even such as your Issa.

"But before I die, I would do something for the benefit of the tribe—not by the directions of yonder creatures," he waved an arm out to sea, "nor of the ambitions of the chief, but of the wisdom of one who has seen much and has no longer any personal desires to gratify."

● He had risen and was standing over me, still holding me to the ground. With one foot he took my gun out of my hand, then, holding my wrists, lifted me to my feet, then off the ground, for he was much taller than I was. Holding me at arms' length, he advanced so that he stood at the very edge and I dangled over the sea. All this while discipline forebade me to struggle; indeed, a sudden movement on my part might have overcome his uncertain balance and sent us both pitching over the edge.

Imagine the enormous strength that could thus hold, suspended at the length of his arms, what was in effect a heavy, full-grown man, and yet not to tremble but to stand as firm as a rock! Two thousand feet below the waves beat on shingle and boulders, and behind me, though my own arms with my weight on them prevented my turning to see, I knew that the edge of the cliff, with the cave-men leader's feet gripping the very brink, was level with my eyes and five feet from me.

My heart pounded and sweat broke from every pore. I set my teeth in a ter-

rific effort to control my fear, to retain mastery of my mind.

He began to swing me right and left like a pendulum, then suddenly let me drop. Such a wave of terror swept over me that I lost all control of my mind, surrendered to a paroxysm of fear. . . .

Then my back struck the rock and my fall was arrested; for he had not let go of me.

I lay on my back on the grassy downs, but my brain was unable to understand the messages of my senses. It seemed that the earth and sky spun 'round and 'round, first one beneath me and then the other—that I was falling headlong and rocks and waves were leaping up at me. Severe vertigo can be very unpleasant; one is unable to move.

"Fear no longer," I heard his voice presently; "you are safe now, though for a moment I almost decided to let you drop. When you have quite recovered, I will explain why I did that."

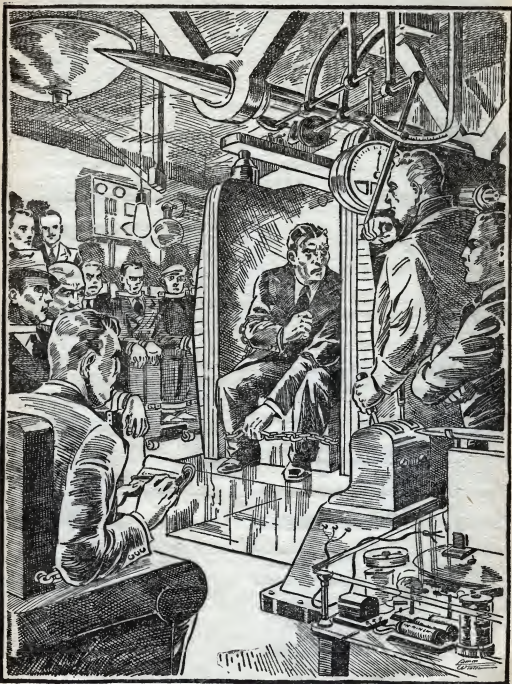
For a time I listened to the pounding of my heart, then at last I was able to rest a steady gaze on him and to listen once more with attention.

(Do not fail to read the thrilling, life-like adventures in the next issue, wherein Spofforth, the Earthman, in the body of Kastrove, the green ape-man, undergoes the strangest experiences imaginable on the weird atom-world of Kilsona.)

WHAT IS YOUR SCIENCE KNOWLEDGE?

Test Yourself by This Questionnaire

1. What creatures does evolution effect? (See Page 137)
2. What type of presses are used to print newspapers? (See Page 140)
3. What is veneer? (See Page 147)
4. Give the basic principles of electro-plating. (See Page 178)
5. Can all metals be used for electro-plating? (See Page 178)
6. Compare the brain to a phonograph record. (See Page 181)
7. How are senses used to transmit messages to the brain? (See Page 185)
8. Tell how a sound is heard. (See Page 185)
9. What are the three bones in the middle ear? (See Page 185)
10. Describe the "brain dynamo." (See Page 191)
11. What are the vibrations per second of middle C on the piano? (See Page 224)
12. What are the two main constituents of the atom? (See Page 226)
13. Name two kinds of interference. (See Page 226)
14. What is the job of the meteorologist? (See Page 236)
15. Tell how the ordinary X-ray tube works. (See Page 237)



(Illustration by Winter)

'At last, all else being ready, he laid one hand on the switch handle and one on the rubber handle of the destinator.

JUSTICE OF THE ATOMS

By CHARLES B. POOL

● "But I tell you the cell was empty—empty as a last year's bird's nest. We had just been showing it to the visitors—we had lifted up the bunk to show how it was made. And there was no one—nothing in the cell but the steel bed and a mattress two inches thick."

Jailer Gorsand was almost tearful because he could not convince the Chief of his truth and his sanity. The city jail was under control of the Chief of Police, and that worthy was much minded to grill somebody until he got a satisfactory account of the affair. He pursued the question further.

"Who were your visitors?"

"Police Captain Worsman of Buffalo, his wife, and a grown daughter, a girl about twenty years old, I should say."

"And you took them into this cell number 76 and showed them all about it?" The jailer nodded. "Who came out last?"

"I did. I opened the door for the visitors and when all three were outside, I gave one more glance around the cell to make sure nobody was left behind. Then I backed out and locked the door."

"Sounds likely," said the Chief with sarcasm. But he was worried, despite his pose and his badgering of the jailer. "And then what happened?"

"Captain Worsman and his wife and I started toward the elevator. Miss Worsman paused to look at a door-lock or something, and then she gave a little startled cry. 'Oh! There's a man in that cell,' was what she said. Of course I thought she was looking at another cell, but we all turned back to look, and there he was. He's a big man, six-foot-three or so, and broad-shouldered. First I made sure of the cell number, and it was 76. The number plates are spot-welded to the doors and

● We hesitate to think of how many stories have been written concerning mad scientists who plan to use their amazing discoveries to conquer or destroy the world. If any theme has been overdone in science-fiction, it is this one. Fortunately, more of this type have been rejected (by this magazine, at least) than have been printed.

We could never figure out why these super-scientists should always be mad and use their discoveries for harmful purposes. It is a very unconvincing and unnatural assumption, and we are surprised that it has been so much overdone.

Of course, any broadminded person will admit that it is only natural for many awe-inspiring, fantastic things to be invented and discovered in the not-too-distant future. Our author shows us that such things will more likely be used to do good rather than harm.

And that is only one of the new features of this story. Here is a realistic and highly entertaining bit of fantasy.

can't be moved. The man was unconscious, but breathing heavily, and there was a little smell of chloroform about him. He was dressed in ordinary dirty work clothes and had a little coal-dust on him. And that's all there is to tell—absolutely all."

"And you expect me to believe it. Well, that's neither here nor there. Did you keep the guy locked up?"

"Yes; he says he's just a bum and a few days on the county or city don't hurt his feelings."

"Well, get him in here. I want to talk to him."

Fifteen minutes later the man shambled in, in the wake of a big policeman. He was rugged of feature and had the listless expression of a typical wanderer. Still in his freight-riding clothes, but with the coal-dust brushed off, he presented much the same appearance as Gorsand had described. Chief Janney took a seat facing

the big man and poured questions at him. He learned that the prisoner's name was Henry Gould, that he had no regular occupation nor permanent address, that he had been in Oakbury for two or three days previous and was unloading coal on the day in question, and at the close of the job the man he had worked with gave him a signed bill of lading and directed him to take it to the office of the Mason Fuel Company, in the Atlas Building, and push it through the slot in the door.

"And did you do that?"

"No. I never found the office. He said it was on the thirteenth floor and I went up there and looked through both halls and didn't find it, and just as I started back to the elevators I heard a step behind me, a little too close for comfort. I turned around and somebody slapped a bag full of chloroform over my head and held me till I passed out, and that's all I know about it till I woke up in the jail hospital, with this man [indicating Gorsand] and a doctor looking me over."

"Well, didn't you get any kind of a look at the guys that put the cap on you?"

"If I got a look, the chloroform knocked it out of my head. I kind of recall that there was two shadows came at me; one of 'em pretty big, maybe bigger than I am, and the other one smaller. But I only got a flash at 'em, a piece of a second, and it was all over."

"What time was this?"

"Well, it was ten minutes after six when we finished the coal, and I reckon it took me ten minutes to get to the Atlas Building on the street car, and I might have monkeyed around ten more minutes getting up to the right floor and looking around for that office. That'd make it around six-thirty when I got the knockout dose."

The Chief turned to Gorsand again.

"Did you notice what time this man showed up in cell 76?"

"Yes, sir. I looked at my watch the minute it happened, as I always do when anything goes wrong in the jail. It was exactly six-forty-six."

"Sixteen minutes," mused the Chief, half to himself, "to go two miles and crawl in through a keyhole. Somebody's nutty."

But continued grinding on the big man only made him tired and nervous—he had nothing more to tell.

Chief Janney instituted a search through the Atlas Building for suspicious tenants of any description, but turned up absolutely nothing. It might have struck the Chief as odd that the offices of the Mason Fuel Company were so easy to find, right on the thirteenth floor where Gould had been directed, but he did not get this point. Had he done so, the whole outcome might have been vastly altered by a little intensive thinking. Anyway, at the end of three weeks of exhaustive and gruelling search, the strange victim was sent on his wandering way and the incident dropped. Gorsand was cleared of any suspicion, and it remained for people to wonder over or doubt, as they chose.

Vincent Ladory, star reporter for the *Oakbury Torch*, had squeezed himself into that investigation chamber and had heard the story at first-hand. In fact, very few stories happened in Oakbury that were not attended by this rotund young man. Someone said that if a phonographic needle could be driven into a place with a sledgehammer, Vince Ladory could get into the same place for news. He was at this time in his late twenties, a fat-faced, pleasing character, despite his too-liberal belt-line, which emphasized his scant five-feet-seven. His turned-down nose, heritage from his Bohemian forefathers, could scent a news story four blocks away against the wind, and his blue-black eyes never missed a detail that could be of value to the *Torch*.

He was fond of doing detective work when time permitted, not with any ambition to "scoop" the police, but for the sheer joy of digging out facts that evaded everyone else. And how he did long for a first-hand session with the heart of this affair! Dig and question as he would, however, the answer was not forthcoming.

A Man Leaves Town

● Henry Gould's mysterious appearance in the city jail happened in August. Vince Ladory was still studying on the question two months later when his mind was distracted from it by some excitement nearer home. Jules Freeman, a friend and fellow-reporter, found himself in sudden danger for his life because of a flighty remark he had made, and what resulted.

It appears that Freeman went into a drinking place about midnight, took on more liquor than he could safely carry, and got into a heated argument with one Tony Perrez, a young mechanic who worked in Oakbury's one big factory, the implement works. The *Oakbury Torch* had been none too favorable to union labor, and Perrez, being head of the local labor council, and also somewhat drunk, took to abusing young Freeman for things that appeared in the paper. Freeman undertook to explain his own viewpoint, but the other would not listen and countered with a torrent of vile language.

"For two cents," shouted Freeman, "I'd break this beer bottle and ram the pieces down your throat."

"Here's your two cents," replied Perrez, darting out the door as he threw the coins on the floor. He wanted no fist fight with Jules Freeman. Next morning Perrez's dead body was found in his room, his neck having been fatally slashed and the broken neck of a beer bottle pushed part-way down the throat. "J.F." was written on the wall in blood.

Intelligent people would have immediately centered all their attention on finger-prints, realizing that while anyone could leave Jules Freeman's initials in the room, only Freeman himself could leave his finger-prints. But Freeman was pursued by two elements, one of them insane and the other very shaky in its morals. Hundreds of the factory laborers worshipped Perrez, and at once leaped to the conclusion that Freeman had followed him home and murdered him. These men were forming into mobs every hour, clamoring for the blood of Jules Freeman, and

there were enough of them to overpower the police if they wished to try it. On the other hand, the police were making every effort to locate Freeman to bring him to trial.

Vince Ladory had his own theory as to why the police and the district attorney were so anxious to send Freeman over the road immediately. Delays are always favorable to the defendant in any trial. Freeman, he knew, was as innocent of the murder as a baby, but in a tough spot. It had many times been darkly whispered that the law-enforcing officers of Oakbury received more money from a certain gangster, Andreas Golo, commonly called Black Golo, than they did from the state. Vince knew this was only too true; he believed that Golo's gangsters had killed Perrez, seizing an opportunity when they could shift the blame to the *Torch* reporter. Admitting all this to be true, if they could railroad Jules Freeman to the chair, or to life imprisonment, the Honorable (?) District Attorney Crone and his friends would satisfy the public clamor for a victim; they would please a lot of radicals who hated the *Torch*, and they could continue to draw their fat graft from Black Golo in return for letting him run his rackets.

It was on Sunday night or Monday morning that Tony Perrez was murdered. By Tuesday evening of the same week the whole city was in a turmoil over the hunt for Jules Freeman, who still remained in hiding, although it was obvious that he could not remain hidden much longer.

● Vince Ladory strolled into Kennedy's Basement Pool Room about one-thirty Wednesday morning. This place was a fertile source of news at times, and Vince's face was familiar there. Vince was "drinking softly" these days, and as he sat down at a small table with a bottle of grape punch, he was joined by a large, fat-faced individual who looked like a prosperous traveling salesman, and who, after a remark or two about the weather, leaned close to Vince's ear and murmured:

"Is Freeman guilty?"

"Absolutely not," replied Ladory, quietly.

"Sure about that?"

"Stake my life on it. After he got through with his drunk Sunday night he went to Wings Boley's house to interview Wings about his flight to Alaska. Wings left for the north the next morning before the news came out, and there's no way to communicate with him. He has a radio, but we don't know when he'll be listening to it, or over what station. When he gets back, or is heard from, I'm sure we can clear Freeman's case with a sound alibi."

"Good," affirmed the stranger. "But at the rate people are searching, he's going to be found before many hours, and when he's found, he's very likely going to be killed by the mob. Now, I'm taking some risk myself, but I'm talking to you because I know your reputation and I don't think you'll get me into trouble while I'm doing your friend a favor. If you can locate Jules Freeman and get him into the Towle Building some time between now and morning, I can get him safe transit out of town, where he can have all the delay he needs. Don't answer me, but if Jules Freeman will show up on the 12th floor of the Towle Building, between two-thirty and three o'clock, dressed in any kind of a disguise, and will carry a white handkerchief in his hand, someone will come to him and ask him if he is Mr. Isaac. If he will follow that party, I'll keep my promise. For him, it's taking a chance with a stranger on one hand, against certain death at the hands of the mob on the other. Do as you think best."

Vince arose and strolled away, as if he had not the slightest interest in what the man had said. He had seen the big man before somewhere, and retained a favorable impression, but he could not recall where they had met or how. Vince went back to the *Torch* office, down into the basement where the rolls of paper were stored and where the police had searched a dozen times for Jules Freeman. With the aid of a crowbar he moved a couple of huge rolls of paper weighing a ton

apiece away from the basement wall, and then leaned his weight against an apparently solid cement block a couple of feet square. After a minute of steady pressure, the escapement device began working and the cement block rolled slowly backward, leaving a square of dimly-lit space, the answer being that any good, live newspaper can use a "safe deposit" box now and then. There was a whisper:

"Jules."

"Coming up, Vince."

The fugitive, cobwebbed and haggard from the many discomforts of his temporary prison, came up to the open space and listened to Vince Ladory at some length.

"Yes," he said at last, "I'll do it. The big fellow is right, this far, anyhow. Can you get me some women's clothes?"

Within a scant half hour two figures, apparently a short, round man and a tall woman with rather large feet, made their way into the Towle Building and rang the bell for the night elevator man. The female figure took the elevator for the twelfth floor; the other went out as silently as he had come.

At a little after six o'clock the same morning Vince Ladory, finishing up his morning shift, was glancing over the teletype news, items that came in from various sources over these curious typing machines. One suddenly struck his eye and nearly struck him dumb. It read:

"Saint Thomas, Ontario, 5:15 a.m., October 7. The young man who mysteriously appeared on the prairie north of Hamersley early this morning has been identified as Jules Freeman, an Oakbury, New York, newspaper man wanted in connection with the murder of Antonio Perez at Oakbury Monday morning. Greatest mystery surrounds matter of how he got here. Freeman admits identity but can give no clear account of how he made the trip. Claims he was in Oakbury until after midnight. No aeroplane has been in this vicinity."

Chief of Police Janney immediately dispatched a large aeroplane and a crew of three officers to St. Thomas with instructions to bring Freeman back for trial.

Hamersey, it appears, is a tiny village a few miles to the north of St. Thomas. There was, however, untold red tape in arriving at the proper official to handle the matter, and finally the Oakbury officers were told that the man would not be released to them. The real reason was that Freeman had convinced the Canadians of his innocence and of his positive alibi whenever Wings Boley should return; and they had decided to protect him until he had a reasonable chance to present his case. Just what they told the American officers is not important, but they flatly refused to let the man go.

Vince Ladory had considerable correspondence with his friend while the latter was detained in Canada, but he got no information regarding that sudden trip. Vince did establish the fact, however, that while Jules had certainly not left Oakbury until after he entered the Towle Building at two-forty-five a.m., he had arrived in the vicinity of Hamersey, two hundred miles away, before four o'clock. That was as nearly as he could set the time, and it only deepened the mystery. No flying machine, however swift and silent, could land on the roof of the Towle Building and move a human being that distance without drawing a lot of attention, even if such a flying machine had existed in the known world.

Eight weeks after the murder of Antonio Perrez, Wings Boley returned to Oakbury. Boley was a celebrity, and what was far more important to Jules Freeman, he was known to be a thoroughly reliable man. When he threw his energy into the affair in favor of the accused man, the district attorney's case against Freeman dissolved like a snowball in Calcutta, and the indictment was quashed.

Not a finger-print had been discovered in the room where the murder occurred. This fact in itself was enough to prove that no inexperienced, half-drunk boy had done the deed. Further, it did tend to prove that the job was the work of professional bandits, and public opinion began to point to Black Golo and his gang as the real culprits.

The district attorney was naturally in almost as bad a spot now as Jules Freeman had been a few weeks earlier. He could only make a hollow pretense of prosecuting Black Golo, while drawing a huge annual bribe from the man, and if a piece of truthful evidence crept into the case by accident, it would be almost impossible for him to escape Golo's vengeance. So, for a time, Black Golo, fat, insolent, and confident, stalked about the town or rode in his bullet-proof car free from interference.

This condition could not last forever, though, and the errant district attorney was finally compelled to lodge a complaint against Andreas Golo for the murder of Antonio Perrez.

The farcical trial had been going on for seven days, during which a very shaky jury had been drawn, when the district attorney got a message that jolted his feelings and stirred his fears. Half a dozen people were in his office at nine a.m., before the day's proceedings in court had started. A young man was using the telephone in a rear corner, and his large, flat-topped desk was practically clear of papers when a resounding crash came from the direction of that piece of furniture.

All eyes whirled toward the spot. A slab, made of cement and weighing about fifty pounds, had been deposited in the middle of the desk top, smashing two or three inkwells and fountain pens into dust and almost going through the hardwood top. On its upper surface were the deeply carved words:

**"PROSECUTE BLACK GOLO IN
EARNEST, OR ELSE . . ."**

"On the Spot"

- The effect of this significant threat would be hard to figure out. No question about it, the district attorney was scared. He was scared stiff. No attempt to reason how the threatening message got into the room or on the desk was of any avail. He thought it might have been fastened to the ceiling and dropped by electricity, but that was not the answer.

He had looked at the ceiling that morning because of certain trouble with the lights, and the janitor had put up a high ladder and inserted new bulbs. No, nothing had been there when the office was opened. And no one had lugged any such weight in through the door since it had been opened. Briefly, the great official was up against a power of which he knew nothing. And suppose that power chose to drop the next slab on his head!

Black Golo, who had been prancing around on bail, in defiance of all sorts of laws, was hustled into jail. There the district attorney visited him and told him of the strange occurrence. Golo was not impressed.

"If you're more afraid of that kind of trickery than you are of me," he blustered, "go to it and see how far you get. And remember, a little of this lockup business goes a long ways. It's all right to put on a show, but don't carry it too far."

District Attorney Crone went to it. He fired three assistants who were known to be in the ring supported by Black Golo; he shifted doubtful policemen into the "sticks"; he gave Chief Janney his sailing orders and advised him to obey them, and he threw all his energy into prosecuting the case, which was lodged against Andreas Golo and four of his followers, his personal guards.

It was a noble effort, but started too late. So much crooked work had already been done that the prosecution failed of its mark and the judge was compelled to acquit the prisoners. Jules Freeman was free; so was Black Golo and so were his four followers. But Crone had turned on the gang and had failed. Now he knew that his life was in constant danger.

Vince Ladory sat at his desk in the city offices of the *Torch* a little after midnight. He was not in the least bit sleepy or off form, having just reported for duty. He had a little assignment to cover, and having provided himself with what he needed on that trip, he paused to look around a moment before starting.

There, on the middle of his desk top, lay a piece of heavy white paper. He could

have sworn that it grew larger after he first glimpsed it, that only half of it, diagonally shaped, had been there when his eyes first started to focus on it; but there was no one to prove it by and he could only believe what he saw. The surface was blank. He gingerly lifted it and turned it over. There was a typewritten message on the other side.

"Ladory: If you want to see the answer to the Henry Gould matter, the Jules Freeman matter, and the Attorney Crone case, *keep it quiet* and come to Room 1314 of the Wangerman Building within the next hour. If you talk or bring interference, you will see nothing. Follow these instructions to the letter and you will be safe and see much."

There was no signature.

Vince did some swift thinking. Then he looked around for someone whom he could hire to kick him. Why hadn't he seen the answer before? Henry Gould had testified that he was sent to the Atlas Building, but after going all over the thirteenth floor, he had been unable to find the Mason Fuel Company's office, one of the largest offices on that floor. Jules Freeman had been summoned to the Towle Building, twelfth floor, and had met his man of mystery per schedule. Now here was his own invitation to the thirteenth floor of the Wangerman Building. The three buildings were in a row. The entrances of the Atlas and Wangerman buildings were side by side. Henry Gould had simply wandered into the wrong building and had been seized upon for the purpose of experiment. Jules Freeman had been called to the Towle Building and, evidently, taken across to the Wangerman by a plank or something placed from window to window. Why hadn't he, or the police, or anyone, taken the hint that the answer lay in the latter building?

● Perhaps an hour before Vince Ladory's invitation appeared on his desk, Black Golo and his bodyguard of four hard-boiled yeggs sat around a table in the rear of a small foreign restaurant in a shady quarter of the city. The only others in the

place were the bartender, two young men waiters, and the cook, the latter out of sight in the rear rooms. Without a second's warning, the five outlaws at the table began reeling about as if from the effects of too much drink. One of them let out a meaningless squawk that drew the attention of the bartender. As that worthy started toward the table, two young men, who had been looking in through the open door, suddenly entered.

"Hands up, all three of you," one quietly commanded the barman and the two waiters. The other youth darted into the rear and brought out the cook, who was lined up with the first three. The front door was locked, the shades quickly drawn, and then the two "holdup" men turned their attention to the bandit gang. The five swarthy outlaws were now slumped over their table, unconscious. Deftly they were bound and gagged against returning consciousness; quietly they were hustled out the rear door and deposited in a large car in the alley.

"Easy money," commented one. "Hope the other boys get theirs with no more trouble than that." And the car was off.

● When Vince Ladory presented himself at the door of Room 1314 Wangerman Building, he was admitted at once by a tall, black-haired young man of probably twenty-five years, a total stranger to him. His escort led him around an interior partition that did not reach the ceiling and into a room filled with such a multitude of surprises that he was a long time getting them cataloged. The mass of electrical apparatus in the center of the room he only glanced at before looking around to see who the people were.

Five swarthy faces in a row belonged to Andreas Golo and his bodyguard of gunmen. All these were seated in strong chairs, their ankles, wrists, and necks securely held by heavy metal rings, so that not one of them could do more than squirm a little. The chairs were set side by side along one wall of the room, which was probably eighteen by thirty feet. At one end of the room, a few feet from the gun-

men, sat District Attorney Crone, likewise pinioned to a heavy oak chair, and wearing an expression of the utmost dread. Two police inspectors who bore doubtful reputations were also held captive in the same way, on the other side of the room. Three attendants moved about, busy with small tasks and keeping a sharp watch on the prisoners. At the opposite end of the room from that occupied by Crone stood a large, full-faced man with slightly curling, reddish hair, dressed in a gray silk smock that reached to his ankles. Instantly Vince Ladory knew him as the one who had suggested the exit of Jules Freeman.

Vince was led to a chair resembling the others, his clothing deftly patted to see if he were armed, which he was not; then the young attendant spoke.

"Just for your own protection, permit me to secure you to this chair. You will not be harmed in any way, and you will be liberated as soon as you have seen what it is desired that you publish in your paper." The big man in the smock looked toward them, smiling.

"It is right, as he has said," affirmed the large one. "You will be thankful for your brief imprisonment. However, we will leave your hands free to use your notebook and pencil."

With slight misgivings, Vince allowed himself to be secured to his chair by heavy clips around his ankles and a chain about his waist.

The Answer

● "And now," announced the big man, "I think we may proceed with our business. Mr. Andreas Golo here has certain confessions to make regarding recent disorders in our city. I believe he will make them willingly. If not, he will make them—ah—under persuasion. Bex, Gaffio, kindly bring Mr. Golo's chair into position."

Golo's chair was trundled up in front of the apparatus near the speaker. There was a table about thirty inches high, the top being of plate glass half an inch thick. Eight inches below the top was another sheet of glass, and between the two a mass

of insulated coils, platinum points, zinc deflectors, and, apparently, huge condensers, all of which made one dizzy to look at. In the center was a disc of plate glass with an interlining of metallic wire that threw off a dazzling series of flashes as the disc spun constantly around.

The big man drew out an insulated cord from the side nearest to him, attached a little three-pronged tool, and drew near to Black Golo. "Now, Mr. Golo, tell these people just what you had to do with the murder of Antonio Perez. Before you start, remember that I know exactly every step you took that night, every man who aided you, every word you said. Tell the truth and tell it quickly. Now begin."

"You goata the devil," growled the outlaw.

The operator touched Golo's manacled arm with the three prongs. The gangster stiffened in his chair, his muscles drew up like cables, his eyes bulged nearly out of their sockets, and then, as the instrument was withdrawn, he gave vent to a soul-harrowing shriek.

"Just a sample," smiled the big man, "of what we may have to give you. That was only a six-volt current. Next time I'll use twenty. Now, come on and tell us about the murder of Tony Perez."

He waved the little fork close to Golo's forehead. Golo cried out in agony.

"I'll tell," he gasped.

"Certainly you'll tell. And the first time you slip and tell an untruth I'll refresh your memory with this tool."

Forthwith came Golo's bloody narrative of how he had tried to get Perez to sell out the local labor council and allow him to work his rackets among the foundry hands, robbing them of a huge amount of money. He had murdered Perez with his own hands, and left the evidence against Freeman to throw the public off the scent. He told which of his henchmen had wiped off the finger-prints from door knobs, etc., and the whole sordid detail.

"And what," asked the big man, "did District Attorney Crone know about this when he started the search for Jules Freeman. Tell it all; this coil is still working."

"He knew all about it. I told him the whole story so he'd know how to handle the job."

"That is all for the present. Return him, Bex."

The district attorney was next brought forward, but he did not need to be "persuaded." He made a full and complete confession of the bribes received from Black Golo during the past two years. Only once did the big man threaten him with the little fork, and that was to get a complete list of the honest assistants on the job, and those who were in the bribe ring. Crone was then returned to his place, and the big man turned to Vince Ladory and spoke to him as if no one else were in the room.

"You may call me Professor Jones in your report," he said, "as I am not a professor and my name is not Jones. You have been interested in the rapid transport of several persons and other objects in this vicinity, and I am here to give you a complete key to the matter, as well as several demonstrations. That is why I have brought these other men up here tonight. They will serve a more useful purpose here than they have in their own ways that they have followed heretofore.

"First, perhaps, I should explain that I am a plater. I have been employed in the Perrold Silver Works until recently, when I resigned to devote myself to public affairs. You probably understand the basic principles of electro-plating. The article to be plated, usually made of lead, is connected with a negative electric current, the supply of silver for plating is connected with the other pole, both are immersed in a solution, and the fine metal travels through the liquid in minute particles, to be deposited on the lead vessel to the desired thickness.

"It has always been held that some metals, notably tin, could not be used for electro-plating. I was never satisfied with that conclusion, and I never stopped my researches until I succeeded in using tin in exactly that manner—I plated a vessel with it. To my own surprise, however, the job was infinitely finer and smoother than that done with silver or gold, and I real-

ized that I had made a new discovery regarding metallic atoms.

"As certain platers discovered that plating could be done on plaster of paris as easily as on lead, so did I discover that other things than fine metals could be atomized and made to travel through a medium to a pre-determined spot; so, also, did I discover that an acid-and-water solution is not necessary to the movement—I move my substances through the air! The really great discovery began to come to light, however, when, in trying to plate a block of lead with atoms traveling through the air, the anode, or piece of fine metal from which the particles came, was re-formed at the destination point, not as plating, but in its original shape. Now perhaps you begin to see the light."

An attendant brought forth a spotted kitten, placing it on the glass table. Professor Jones placed a heavy lead inductor plate on each side of the animal and adjusted a long, gold-plated rod on two brackets so that its offset middle portion passed above the edges of the lead plates while its ends were in a direct line with the middle of the cat's body and also of the plates. One end of this rod was needle-sharp; the other was fitted with a rubber handle, and this the big man used in setting the device.

"Everything between these two plates," said Professor Jones, "will be instantly transported across this room and deposited in the plate glass case at the other end of the room. The distance is short. The electrons composing this cat's body will be transported through and between those forming that glass case, and will arrive there in exactly the same relation to each other as they stand in at present. Notice the effect on the animal's nerves."

He measured the current and closed a switch. There was a faint crackle. Vince Ladory had not watched the operator's motions, for he was looking at the glass case to avoid being duped by any mere sleight of hand, but there was no deception. One second the thing was empty—the next it contained a kitten, the same kitten that had been between the plates.

The animal lay on its side, twitching for a moment, then stretched itself upright and began to hunt its way out.

"Thus," said Jones, "did I send Henry Gould to jail without waiting for trial. The tramp was the first living man on whom I experimented. There was maybe a little risk, yes, but what is the life of one bum compared to the progress of science? Already I had transported animals repeatedly, and I was sure I could send the man as well. The only fine calculation necessary was fixing the exact distance, direction, and altitude of a certain empty cell in the city jail. You would learn, had you the time, that I have a great number of survey maps in my possession, covering points of interest all over the city and other parts of the United States and Canada, and that my surveying instruments are as much superior to common ones as the latter are to 'stepping off' distances.

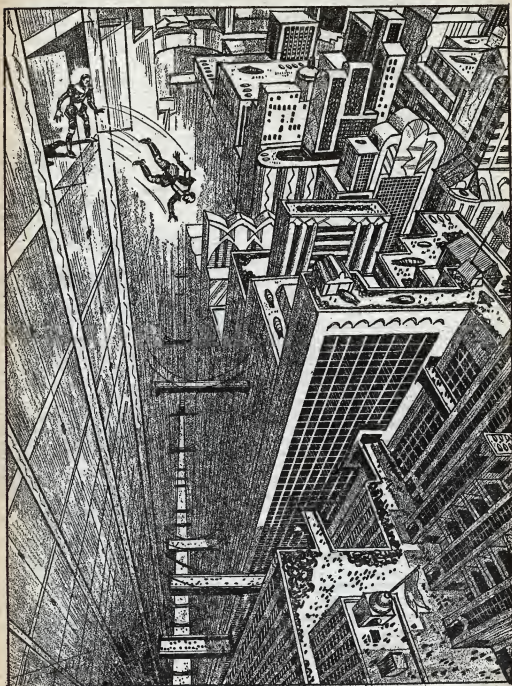
"Perhaps you also know now how our friend, the *honorable* district attorney, received his concrete message about prosecuting Andreas Golo. This was materialized about three feet above his desk, at a moment when I had learned by telephone that no one would be killed by its descent. I may yet choose to drop something similar on his thieving head.

"You will not approve of everything I do tonight. One reason why I have secured you to your chair is to prevent you from interfering with actions that might not tally with your ideas of right and wrong, although I am at all times an instrument of strict and impartial justice."

The Last of Golo

● "Mr. Crone," Jones addressed the attorney, "you have seen what punishment I can deal out to those whom the law does not reach. You have been an unfaithful servant and a scoundrel of the lowest sort, but I believe you have possibilities for good service to your country. If I give you the opportunity, will you devote the rest of your life to municipal reform and honest government, wherever you live?"

(Continued on page 233)



(Illustration by Marchioni)

Frantic, Stetson leaped, clutching. Cloth and silky hair brushed his palms—and the casement ledge framed uninterrupted blue.

THE MEMORY MACHINE

By BERNARD SACHS

● The apartment was distinctive, as such things went in these last years of the twentieth century. That is, its distinction was what money could provide—tremendous space and a superiority in the quality of furnishings. But the same design of trimetallium day-bed, couch, table, and the rest, on a less expensive scale, were to be found in thousands of apartments as far down as the hundredth floor. And in the dreary lower stories there were shoddy reproductions in countless homes.

Turning his back to it, Howard August swung open one wall-length window and made a curt gesture at the grey spires of the city stretching away below him—profuse as bristles on a brush. "Look at them," he declared. "There's proof!"

Ruth Davis gazed at him with an expression of indulgence. "Really?" she asked. They had already been companions four of the required five years. At the end of one more the State would allow them to marry.

"Yes, really. Man has forgotten how to create. Just look. How many thousands of buildings can you see? Yet I'll wager you can count the different architectures on the fingers of one hand. And underneath the Gothic nodules and the Romanesque windows they are all skyscrapers. That's all we've had since the skyscraper was developed a century ago, nothing new, only the old designs hashed over and plastered to the same kind of body."

"So what?" Ruth Davis demanded, smiling. "Have you discovered something? I've been telling you the same thing for the past three years, if only you'd listen."

"But seriously," insisted Howard, "it's pretty bad when men can no longer originate. It's not mere marking time—it's stumbling backwards."

● Among the pages of this story you will find an authentic news article regarding certain investigations of the electrical characteristics of the brain. This falls right in line with the current story by our new author, although the story was written before the appearance of the article.

The brain can very easily be compared to a phonograph record—thinking of a past experience can be likened to playing an old record. The main difference is that the record can be played on any machine, while our memories can be replayed in our own minds only. Of course, we can tell others about them, but they can not experience the sensations that come with the actual happening.

Mr. Sachs brings out in this story a very interesting possibility regarding these memories that are engraved upon our brains. You will find here a convincing and vividly told novelette that will leave a pleasing memory in your brain that you will re-play very often!

Raising her eyebrows, Ruth said, "My! Such eloquence!" She put her hands on his shoulders, suddenly grave. "Darling, what you say is so, but we only make ourselves unhappy by mewing over it. If we could do something it would be different—but we can't. There are more important people than ourselves thinking the same, who are just as powerless. My father, for instance—augmemory Technicians-Commander—and even he can't do anything. So what should we expect of ourselves? Let's forget it." She teetered on her toes and gave him a quick kiss. "There . . . now come, let's go places."

"Where?" asked Howard. "The beach?"

"No! If I see those decorations along the promenade just once more—I'll shriek!"

"Well, then how about the mountains? We'll have a plane drop us off in one of the forest reserves."

"They're too civilized—lines of trees like soldiers on parade. If the woods were at all wild, like in the old days, they would be interesting. But as it is—" She shrugged.

"Then what shall we do?"

"I don't know."

Howard shook his head ruefully. "Sometimes this problem of what to do becomes so difficult, I almost wish we weren't different from everybody else—that we, too, would submit to being augmented."

Ruth took his head between her hands. "The day I see that puncture on your forehead, everything is finished between us, because you will no longer be *you*, then, a person. You will only be an imitation man, living on other peoples' experiences. Come now, do you forget what we have thought out together?—that people can be happier, more alive, living without the stimulation of your father's invention? We don't need it. We have done very well without it so far—and we can go on that way."

"Right," responded Howard. "And I know where we're going now. We have more than three hours before our bodyguards will return and miss their precious charges. Let's travel on surface-level."

"Slumming? That is an idea. Have you ever been down there?"

"Once or twice, but never without the guards. I'd like to go like one of the ordinary people, without any armor."

"Mightn't they be dangerous?"

"Nonsense—no more than you or I."

"All right, then. Ring for our selfmobiles."

So, as casually as all that, they went out—and wandered into momentous events.

CHAPTER II

A Street Brawl

● Huge draughts blew along the bottom of the man-made chasms. Ruth and Howard kept to the side in their selfmobiles, away from the speed lanes in the center. These selfmobiles were grandchildren of the automobile—large, comfort-

able motor-chairs, with an electric power unit inside an enclosed portion under the seat capable of driving it at speeds up to fifty miles per hour. Each was equipped with an automatic radio-beam braking device that made collisions impossible. On surface-level, sub-levels, and in the buildings, selfmobiling was replacing walking.

As they rolled around a corner and a gust of wind tried to wheedle his helmet from his head, Howard clenched the limp, flopping brim. "Say," he muttered. "Must I wear this awful thing?"

Ruth giggled. "You'll stand out like the newest augmemory theatre if you don't. It's the fashion, strictly. Do you want to collect a crowd? Then suppose someone recognizes us?"

"All right, young lady, you win."

Howard craned his neck to look up along the walls of the buildings lining the street. They slid away in narrowing perspective to needle sharpness. And above their points, brisk, were the minute scurrying dots of the air traffic. "Impressive, isn't it?"

"Yes."

The entire width of the street was abustle with selfmobiles. In the center lanes they flashed by with faint hissings. Along the sides they moved slower, endless streams disappearing into and welling out of the gleaming surface-level stores where each of the great specialized chains had branches. Frequent among the stores were the sumptuously ornate augmemory theatres, busier by far than other establishments. Every now and then familiar orange-on-black shouted the location of another augmemory university. They came to one corner where several hundred selfmobilitists were bunched together, stationary, listening to a pleasant bass voice—powerfully amplified—orate.

They paused at the fringe of the crowd. A bald-headed old man, standing on the seat of his selfmobile, was the speaker.

"But you don't know, do you," he cried, "that augmemories are purposely weakened by Mr. August, so that our doctors must after several years have their knowledge re-instilled, time and again, and each

time pay him tuition money? No, the newspapers won't tell you about it, because Charles August dictates what the papers print or do not print."

"Your father is getting a lambasting," grinned Ruth.

"I don't ask you to take my word for it," the speaker continued. "I want you to think it out for yourselves. These things that I have told you, you will find set forth in a pamphlet the lady is distributing. Take it home with you, read it through, and judge with an unbiased mind."

The lady, a kindly-faced white-haired woman of sixty, circulating through the gathering, held one out to Howard. "Won't you take a copy?"

A burly young man reached over the arm of his selfmobile and snatched it from her hand, saying, "You need a good beating. Then you wouldn't go around causing trouble."

"That's right," supplemented a thin man beside him, evidently an ally, who glittered with trimetallium ornaments.

"Do you wish to keep the pamphlet?" inquired the lady.

"Certainly not." Dangling it before her eyes, he slowly tore it to bits.

Ruth nudged Howard. "Look. The speaker's called a recess."

The bald-headed man had jumped from his selfmobile and was making his way through the crowd.

"If you didn't want it, you should have returned it," reproved the old lady mildly.

"It's not too late," the burly man retorted, stepping out of his selfmobile, and flipped his hand.

The scraps struck her face in a lump and broke, fluttering about her like white confetti. At that moment the orator came through the throng. His eyes burned, yet he spoke quite calmly. "If you were a gentleman, I'd ask you to apologize—but you are not. Please leave."

"I've got as much right to stay as you have. I'll stay here as long as I want."

"You are behaving like a silly child."

"You say that again and I'll—" He lifted a threatening arm.

The old lady grabbed his wrist and murmured, "Please!" Annoyed, he cried, "Let go!" She gently insisted. Jerking his hand free, he slapped it, palm open, against her cheek.

That galvanized the speaker. His face suffused with an angry flush, he rushed at the burly man, thin arms swinging. The other shielded himself with his hands and backed away. Stealthily the dapper ally slipped from his selfmobile and, creeping up behind the orator, pinned his arms to his side. The brawny fellow grinned. "The next time hold on to yourself," he advised. Drawing back his arm, he struck.

"No," Howard exclaimed. "That I don't like." Leaping from his selfmobile, he swung the bully around by his collar. For a moment the man glowered at him, surprised; then, without warning, lashed out. Howard stepped back, his head ringing from the blow. He glanced at Ruth, shrugged regretfully, and abruptly took the offensive, throwing hard competent fists that jarred grunts out of the other's bulky body. From the corners of his eyes he saw the little orator squirming, trying to break the dapper fellow's grip.

The selfmobilists milled about them. Then there was a cry of "Police!" The burly man, retreating to his motor-chair, fled at top speed. Freed by his captor, the little orator darted to Howard. "Come—let's get out of this."

Howard shook his head. "That's not necessary."

Ruth came up and said, "It's best, Howard. Let's go."

The orator and the old lady ran to their selfmobiles and in a moment were racing along the street—Howard and Ruth tagging close behind.

CHAPTER III

New Friends

● At the first corner, they swung into the cross-street and slowed to a side-lane pace. Midway along the block they rolled leisurely into the thoroughfare of an arcade tower, emerging at the other

end unexceptional shoppers, with the little man's pink pate quenched beneath a helmet produced from a nook in his selfmobile. Ten minutes later they passed through the unassuming doorway of a residential building and rode to the eighty-fifth floor, where dwelt those not quite wealthy and not definitely workingmen. They left their selfmobiles in the hallway. With a warm "Welcome!" the erstwhile orator ushered them into his home. Ruth and Howard paused on the threshold, delightfully bewildered.

They had read of such apartments in their books, not fancying that any still existed. It emanated an atmosphere of mellow coziness. The furniture, whose wood gleamed in subdued lamplight, seemed ever so much more comfortable than the modern metallic furniture. On the floor, instead of the brilliant geometrics of recent carpeting, was the quiet green and rust of an antique Persian Ferahan. There were unexpected knickknacks in the corners—statuettes, a bowl of fish, a plant in a reddish pot. Extraordinarily, two walls were occupied by shelves crowded with books. Obviously the creation of a personality free from augmemory instilled theories of decoration, the room was homey and lovable.

Ruth nudged Howard, and following her gaze he saw the white-haired lady gently pinching the orator's wrinkled cheek. "Your temper again, you old fool," she chided fondly.

"I'm sorry, Elizabeth. I couldn't help myself. When he hit you, I could have killed him."

"Now, now, you blood-thirsty old fool. Where are your principles?" She smiled at Ruth and Howard. "He merely talks that way. It doesn't mean anything."

The little man, with a start, turned, running an apologetic hand over his glistering baldness. "I—I beg your pardon; I am forgetting myself. Dr. Frederick Stephens is the name. This is Mrs. Stephens."

Howard was about to reply in kind when a shake of Ruth's head stopped him. Nicely, Dr. Stephens filled the gap. "An

unorthodox manner of bringing the meeting to a close, wasn't it?" He indicated a sofa with his fingers—"Sit down, won't you?"—and himself sank back into an armchair facing it. "I am grateful to you for coming to my help," he said, and smiled wryly. "I'm afraid I am not very proficient with my fists. It was a gallant rescue—" he shot a keen glance at them—"and quite unusual."

"Why?" expostulated Howard, twisting his helmet in his hands. "Anyone would have done it."

"No one else did. Augmemory makes people sluggish . . . why have you pencilled the perforation on your foreheads?"

The young man grinned. "So's to travel surface-level without attracting attention."

"Well, it is fortunate you were nearby. You saved me from a beating . . . Elizabeth," he called over his shoulder, "how is the tea coming on?"

"In a moment," came Mrs. Stephens' voice from the adjoining room.

"An old custom," Dr. Stephens said, "and one probably strange to you. But if you will stay and have tea with us, I shall be very happy."

"Tea!" replied Ruth, her eyes shining. "We'd be delighted!"

Mrs. Stephens bustled in behind a Lilliputian wagon bearing an urn, cups, and chocolate cakes in crinkly paper jackets.

Ruth clapped her palms over her eyes and turned her head away. "No!" she cried ecstatically. "It can't be!" Slowly she slid her palms aside. "Actually! Homemade cakes! Well—" She jumped up and hugged Mrs. Stephens. "I am going to kiss you for this, you darling. You must show me the recipe and I'll try it if I can steal the stuffs. Imagine, cake not from the Breadstuffs Syndicate! How in the world—?" She pushed the woman's white hair back from her forehead. The skin was smooth, unbroken. Ruth hugged her again. "You—you *person* you!"

"Come, come now, my dear," said Mrs. Stephens, smiling; "we mustn't let the tea become cold."

As Howard was stirring the sugar in his cup, he said to Dr. Stephens, "That's

quite a serious charge you made against Charles August, about his dampening the intensity of augmemories. Are you certain of it?"

"Of course."

"But how can you be? Only one of the higher augmemory technicians can know definitely. Have you ever handled the machine?"

"I know it as well as any other living man, probably better. That is why I know Charles August is misusing our invention."

"Our invention?"

Dr. Stephens pursed his lips. "You are skeptical, but I think you will believe me when I tell you I am co-inventor with Charles August of the memory machine."

"You!"

"Yes. That is one reason why I am so bitter against the Charles August of today—because I knew him when he was a young man." Dr. Stephens shook his head wistfully. "He was different then. He was a pleasant friend. I remember the afternoon in the cottage where we boarded when the whole business was born. We were both avid readers, as most young men of college age were in those days, and we were sprawled on the bed browsing through a dilapidated copy of Israel Zangwill's *King of Schnorrers* when I came across a story that tickled my fancy, a striking bit of whimsy about a machine which would make it possible to buy and sell memories. I showed it to Charles, who read it through and said, 'That's not a bad idea, is it? It would be a fine substitute for movies.' In those days there was a contrivance called 'motion pictures' which was very popular as a means of entertainment. Laughing, I picked up another book and resumed my browsing.

"But Charles crouched there with the *King of Schnorrers* on his knees, not turning a page. It must have been fully a half hour later when he said, 'Is it so impossible?'"

"I replied with a hackneyism of the time. 'Nothing is impossible. But it is not probable.'

"He wanted to know why. He pointed out that when something happens to us, it isn't finished when the incident is over. Years later we may remember it. Therefore there must be some sort of impression of that incident on our brains. That impression might be actually physical—microscopic ridges or grooves added to the convolutions of the brain. Probably, however, it was an electrical manifestation. He informed me that years before a group of Harvard Medical School scientists under Professor Walter B. Cannon, one of the world's leading physiologists, had definitely demonstrated that there was constant electrical activity going on in the brain and had indicated that the sense organs—the ears, eyes, taste buds, and so on—transmitted their messages to the brain in the form of electrical impulses.

● "Charles told me that sound, for one thing, had already been traced as it goes—first as vibrations and then as electrical surges—through the mechanism of hearing into the brain. When you hear a noise, he pointed out, let us say of surf roaring, the sound waves are collected in the outer ear and reflected into the auditory canal, where they strike the eardrum, causing it to vibrate. The eardrum is attached to three small bones in the middle ear, known from their peculiar shapes as the hammer, the anvil, and the stirrup, which intensify the vibrations and in turn send them into the inner ear, a cavity containing the exquisitely complex structure known as the organ of Corti. Here the vibrations are transformed into electrical currents, which travel via a band of delicate fibres, as if along a telephone wire, to the mid-brain—the location of the hearing center. From there the currents branch upwards into the cortex or gray matter of the brain. The process is, of course, almost instantaneous. When the electrical nerve impulse created from the original sound waves registers on your brain, you hear surf roaring.

"Now, Charles argued, that is not the end of it, for we may recall a long time

after that sound of breaking waves. The memory is there whether we are in the act of remembering or not. In all probability, the electrical surges leave a residue stored in the cells of the cortex—like the phonograph—you may have read of that instrument in your books—when the horn picked up the sound vibrations and led them to a needle which fixed them into a wax disk.

"Probably, he reasoned, the cells of the cortex are full of these stored-up currents—impressions of seeing, hearing, smelling, touching, tasting. If we could invent instruments delicate enough to tap these currents, we might be able to transfer the sense impressions to the brain of another person.

"Put that way, the idea seemed logical. But as I pointed out to Charles, there were two great obstacles to surmount, either of which might mean defeat. First, he would have to invent instruments capable of recording these currents. Second, for re-transmitting them, he would have to create a current duplicating that in the brain.

"And in addition, I argued, to give these memories to another person would be impossible, for impressions must come through the various faculties of sense—sight through the eyes, hearing through the ears, and so forth. He answered eagerly, his eyes glistening, that sense reactions are only nerve *impulse*, until they reach the brain and there become *sensation*. The memory machine—he was talking of it as if it already existed—would act directly upon the brain, without bothering to give impressions to the primary organs of sense.

"He was carried away by the idea, and he infected me with his enthusiasm. We set up a laboratory of sorts in the basement of the cottage and began to dabble. The more we experimented, the more absorbed we became. We shifted our college schedules to get a thorough background in the sciences, and in due time plunged into those specialized subjects that might prove helpful. We were already studying postgraduate when we

hurdled our first obstacle, establishing as a fact that memory involved an electrical process. The apparatus used in these experiments pointed the way to the next step, creating instruments to record the sense-impressions. They turned out to be not at all complicated. Two metal plates—electrodes—fastened to the front and back of the skull, received the currents. These were then amplified several million times, until they were powerful enough to light a bulb which trained a delicate beam of light on a revolving sensitized cylinder. As the current fluctuated, it caused the light to brighten and dim, and the fluctuations were recorded on the cylinder. To transmit the memory to a second person, we planned simply to reverse the process.

"But the problem of duplicating the current almost stumped us. After months of terrific work that yielded not the slightest results, we were about ready to admit ourselves checkmated. For days we were a hair's-breadth away from chucking it all, when Charles stumbled on an article in a technical magazine that sent us off again in full cry.

"It was an explanation by a German of his lie-detector, which operated by showing the fluctuations, during questioning, of a current passed through the brain of the subject. The generating apparatus of the contrivance was what interested us. Experiments with a replica proved it to be what we needed.

"Then followed the all-important test. The first subject was a down-and-outer we picked off the streets. Charles interviewed him exhaustively beforehand, keeping the information secret from me. We couldn't have picked better. The man's brain was packed with strong, terrible episodes. He had been a soldier in the First World War.

"Because he was frightened by the strange-looking machinery, we administered chloroform, to make sure he would be relaxed. While Charles handled the controls, I remained beside the man, wondering whether we were about to become inadvertent murderers. When the instruments had reached their proper intensity,

—the process has been refined immeasurably since, all augmemories being broadcast from one central station—Charles flicked a switch, counted several seconds, and flicked it out. A few seconds, that's all it takes. We unstrapped the temple plates from the subject and carted him into the next room to sleep off the chloroform.

"Then it was my turn. Charles placed the chloroform mask over my face and I droned off into darkness. I awoke into a hell. I was aware dimly of lying in a bed and of Charles beside it with a notebook on his knees. But within I was writhing, recoiling from horrible images of men being crushed and mutilated. The man's entire life, everything he had experienced, had been impressed upon my brain. There were bitter-sweet childhood incidents and memories of gawky adolescence; there were heart-breaking sacrifices and mean, selfish actions that had plagued his conscience. But overshadowing all the rest were the memories of war. The machine seems to have brushed away the fog of forgetfulness which had preserved the man's sanity and transferred them to me in all the original instant's awful vividness. I did not see pictures; I was in the midst of actuality. I touched things—the stubble on my unshaven chin, the cold hard butt of my revolver. I smelled the rancid odor of exploded gunpowder, the nauseating stink of decay.

"For days I raved like one demented, while Charles observed me and made notes. Then the memory dimmed—if it hadn't my mind would have snapped.

"Yes, the machine was a success, but—" Stephens shook his head—"I never submitted to it again."

● Howard said, "You had ample reason. . . . Still, nothing you've told us reflects on Charles August."

Stephens sighed. "He was all right in the beginning, but then something happened which changed him. The prelude to it was another discovery of which only some of the higher augmemory-technicians are aware. When we went over the cylinders, we found a tinge on them that we

hadn't noticed before. We transmitted the war veteran's memory to other subjects, though weakened to a safe intensity, and found the solution when we heard from their lips snatches not only of the veteran's life, but of my own. When the machine was giving me the memory of the veteran, it seems that it received the impress of my own brain at the same time, what might be called a reflection. Afterwards we managed to separate the flow of currents so that a separate cylinder could be made of this reflection, without the subject's knowledge.

"We had begun to expand our world. We had invited several scientists to a demonstration, and had made of them enthusiastic converts. Word spread. An international conference was arranged, and so compelling were the rumors that prominent scientists of all nations attended. You know, of course, the outcome. Funds were donated for the first transmitting laboratory. It was very much a success. Money came pouring in. We charged an atrocious rate, but the élite liked the new fad, the more that its expensiveness rendered it exclusive.

"Then it happened. The inventor of the lie-detector began suit to enjoin us from infringing on his patents. We were in despair. If he succeeded, he would be able to squeeze what he wanted from us, unless we took the alternative of destroying our machine. We hired lawyers to prepare our briefs, but the facts were against us. We had used his patent to another end, improved it and gone beyond it, yet essentially it was the same. His was a basic patent.

"I was in the laboratory late one evening when Charles came in with suppressed excitement in his bearing. He was carrying a cylinder which he silently handed to me. I read its label. It was the reflection of the memory of the German inventor, who had submitted to a transmission at the international conference as had most of the attending scientists. He asked me to give him a transmission of the reflection. I demurred. It seemed an underhanded thing to do. But Charles

pleaded with me, and I confess he did not have to exert himself in the task overmuch, for the idea was tempting.

"I had expected some item concerning the German's handling of the generator which we had overlooked and which might help our case. After unstrapping the head-band, I asked him whether he remembered such details, but he brushed the query aside. He said we had nothing to worry about, and, with a hard expression on his face, he explained. He had discovered through the reflected memory that the German had become entangled during his stay at the conference with a well-known society woman. He rattled off her name and some details of the intimacy. I was horrified. I protested. It would be blackmail. Charles waved his hand and asked me not to be a child. I said I would not be party to the knavery. If he went through with it, he and I were quits. He stared at me, then said, 'It is better so. You would hamper me . . . you will be paid for your rights to the machine.'

"Thus we broke. Charles, unhampered, exploited our invention to the full. He completely revolutionized all the games and means of entertainment that the world had invented for itself. His staff of technicians had managed to cut up individual memories so they could be doled out in little sections. The memories of baseball players, for instance, would be trimmed away until all that remained were recollections of the contests. It was a gain in efficiency. Followers of the game could play it through the minds of the ablest players. A polo devotee who had never ridden a horse could enjoy a match as vividly as if he himself were in the saddle and swinging a mallet. Watching sports became too tame. After a while attendance at actual contests dropped and fewer were held.

"A new class grew up, that of people unusually sensitive to colors, sounds, smells, they who in earlier times, if they had the gift of expression, were poets, musicians, artists. Now they became as if debauched, hunting for thrills to sell

to augmemory. The arts, like sports, became mere shells.

"Then Charles conceived another brilliant idea—augmemory as a substitute for education. He augmemized the outstanding experts in all professions and sold their memories to students who, having learned consciously no more than rudiments, were then finished professionals. What the result was is most prominently illustrated by the structures you can see from these windows. All creativeness was rigidly channeled and became merely repetitious of what had been done by the masters already.

"Charles was not content with holding recreation and education in the palm of his hand. He closed his fist and squeezed. He dampened augmemories far below the safety point to a faintness that wore off quickly, so that the public would augmemize more frequently.

"He stepped beyond the confines of augmemory. To-day he dominates the most important newspapers in this and other countries. Why? Because he has become a heavy stockholder in armaments corporations, and with this means of propaganda he can frighten people into buying armaments and filling his pockets.

"That is not all. Holding the reflected memories of practically every influential person in his hands, he has been able to blackmail them into legislating and governing as he wishes."

"He must, then," Ruth said, "have many enemies. Why hasn't he come to physical harm?"

"Discounting the moral aspect," replied Dr. Stephens, "these enemies know that if he died, they would be overwhelmed by opposition from his puppets, men as prominent as Publications-Director Hubert. These dishonest officials would not hesitate to kill—not just for the sake of killing—but because above everything else they fear exposure. They have a standing plan to take over augmemory in the event of Charles August's death, for they are afraid of the liberal ideas of his son. No—while he lives, we can at least attempt to

arouse public opinion. If he dies, we are finished."

"These things may be so," commented Howard. "But I couldn't say, at the moment."

"Oh! We're late!" exclaimed Ruth, glancing at her watch. She stood up. "We must go now. Thanks very much—for everything."

"No," said Mrs. Stephens, "don't thank us. We thank you. Human beings are so rare to-day! Please come again."

"Surely," said Ruth.

As they rode down in the elevator, sitting in their selfmobiles, Howard said, "Did you notice that he didn't ask our names?"

"Yes, that is rather odd."

"Do you think there's anything to what he said?"

"I don't know."

"Neither do I. I think I'll drop in on the pater to-morrow and ask him."

CHAPTER IV

Father and Son

● Howard "Good-morninged" himself past one more door into still another room, this one somberly conservative. A bespectacled man, behind a desk that rendered him unimportant, lifted a thin sharp face, which broke into a fawning smile. "Oh, Mr. Howard! How *do you do*?"

"Fine, Stetson, thank you." He winked at the door behind the cringing back. "Pater in?"

"Yes, sir. Shall I announce you?" His finger hovered over one of many buttons on his desk.

"Don't bother. I'll go right in."

Charles August put down his pen as his son closed the door. "Hello," he said in a voice that lacked timber. In his colorless face the perforation on his forehead was distinct.

"Hello, Dad." With a shake of his head, Howard seated himself in a chair beside his father's massive desk. "You looked ragged. Why don't you run out to the beach and take a little color on?"

Charles August shrugged. "Why both-

er?" There was in the euphony the dry cynic twist of boredom. "What brings you here?"

"Nothing in particular." Howard was watching his father with head aslant. "It's just that I've been hearing annoying rumors about you."

"Why let them bother you?"

"These say some rotten things. They got me rather excited."

"I envy your ability to do that. . . . What did you hear?"

"Well, for one thing, that you purposely dampen the intensity of augmemories. Is it so?"

"Yes. That was not a bad idea. It doubled the market."

"But, Dad, please! You don't mean that you think it's a good business scheme?"

"Do you see any weakness in it?"

Howard, astonished, cried, "Why, it's no better than robbery!"

"Don't be childish. All business is robbery if you look at it that way."

"Nonsense. Business can very well be honest. . . . Dad, don't you *feel* that dampening is cheating?"

Charles August gazed at his son and said, "Cheating? You are still a child, Howard."

"I wish," Howard muttered, "that such a thing as the memory machine had never been."

"Why? It is what man has always wanted above all things, something to entertain him, something to make him wise without his sweating for the wisdom."

"Not wise—sterile, decadent! Your machine has killed everything worthwhile in man, made him hardly better than a beast."

"I envy you your fervor. . . . By the way, do you know a Dr. Stephens?"

"I am pleased to say I do."

"That explains . . . but please? Why the attachment?"

Howard was breathing quickly, his cheeks flushed. "Because he is an honest man—which you are not."

"Isn't that harsh judgment for a son to give his father?"

"It is the truth!"

"Is it? What else has Stephens told you?"

"Something I hesitate to speak of, lest you admit that, too. You own stocks in armament companies?"

"Yes."

"Did you have your newspapers raise war scares so that your firms could profit?"

"You assume a modesty on my part that does not exist. It is a profitable arrangement."

"You don't attempt, even attempt, to deny it?" Howard was almost choking. "Don't you know you might cause a war that might wipe out countless lives?"

"That would be unfortunate."

Howard was on his feet, incredulous. "And you don't even attempt to deny it, before me, your son?"

"Accustom yourself to these things. In a few years you shall know of them anyway." He placed a finger against the mark on his brow.

Howard stepped back, aghast. "You would not dare!"

"Full intensity. So that when my mind begins to fail, you shall take it on, each impression clear, unimpaired, so strong that your personality shall become merged in mine. You shall continue what I have begun."

Howard said quietly, "Never . . . Good-bye, father." Wheeling, he strode from the room.

CHAPTER V

Another Ally

● The place was bare. The only sign that here the actual operation of all aug-memory was controlled, was the one wall covered from top to bottom with panels of switches, dials, and red and green lights. The total furniture was a desk, its top bordered with rows of push-buttons and knobs, and a chair, both in the middle of the gleaming floor. Beside these, in their selfmobiles, sat Howard and Ruth. They had dropped in for a mid-day hello.

Technicians-Commander Davis, natty in his blue uniform, tiptoed to the one door in the room, listened, then tiptoed back and locked it by pressing one of the buttons on his desk. "Now," he sighed, "we can talk at ease."

Howard and Ruth were scrutinizing the panels.

"First time in the Central Control Room for both of you, isn't it?" asked Commander Davis.

"Yes," answered the young man. "Don't you find it hard to keep track of which theatres receive which memories?"

Commander Davis smiled "Why should it be? We broadcast only one cylinder to, all theatres at the same moment—it conserves our supply. The only time we don't is at three o'clock each day, when we cut in another cylinder, something a little more interesting, for technicians, professional men, politicians, and any one besides who can afford the price. . . . But let's get down to more important things. Dr. Stephens tells me you've thrown in your lot with us."

"Yes. You are in touch with him?"

"All of us are—on the quiet, of course. What are you going to do with yourself now?"

Howard clenched his fist. "Attempt to make amends for what my father is doing. I'm going to spend my time working for the abolishment of augmemory."

Commander Davis stroked his chin reflectively. "I can see Dr. Stephens hasn't had a chance to tell you all. Not abolish, but regulate," he explained. "For one thing, it should be eliminated from all education, so that the sciences and the arts can get back onto their own legs. And in a positive way, too, it can become an extraordinary power for good. If instead of being used for blackmail, the reflected memories were made public, much of the badness in humanity would disappear. That's a broad claim, but no man would do or think evil, knowing it was going to be spread in the market-place. The blood-cousin of evil is secrecy."

Howard, by a movement of his head, agreed.

"After all," Commander Davis went on, "a large part of man's sorrows are brought on by himself. There are troubles, that of disease and natural catastrophes, against which we are still rather helpless. But the self-inflicted troubles — individual quarrels, war, exploitation of one class by another and all that carries in its

train, crime, violence, suffering—all these things arise from prejudice and misunderstanding and can be cleared away. Aug-memory can do it. It can open the minds of neighbors to each other so that lies and bigotry will be swept away and replaced by complete understanding and sympathy. This holds, of course, for nations, too.

And since it does, it shall settle once and for all the ghastly problem of war. When one people feels sympathy for another, war between them is utterly inconceivable."

He shook an emphatic forefinger. "Where there is sympathy, there cannot be hatred, antagonism. We know that, but up till the advent of augmemory, sympathy was only a word, beautiful and—on a universal scale—impossible. The barriers to understanding were too deeply buried to be touched by superficial means. The forces feeding misunderstanding were too immense. Then came augmemory, to tantalize with its golden promise. It was never put to the test. The inventor has always used it for his own selfish—"

Commander Davis broke off and stared at his desk, his face turning white.

"What is it?" cried Ruth.

With one quick, frantic motion, her father bent over the desk, twirled a knob.

"What's wrong?" demanded Howard.

Commander Davis drooped limply into his chair. "I forget the floor telephone was open." He managed a wry grin. "You

BRAIN ELECTRICITY HEARD BY SURGEONS

Current Discharges Are Also
Photographed at Chemical
Congress at Haryard.

SOURCE OF HEARING SOUGHT

Dr. Donald C. Balfour Elected
Head of American College
of Surgeons.

By WILLIAM L. LAURENCE.

Special to THE NEW YORK TIMES.

BOSTON, Oct. 18.—The electrical activity of gray matter, the thinking apparatus of the human brain and seat of intelligence, was demonstrated at the Harvard Medical School today before the Clinical Congress of the American College of Surgeons.

The demonstration showed that there is a constant electrical activity going on in the living brain, and that rhythmic electrical changes are going on constantly in the brain cortex, the upper brain, even in the absence of any sense stimulation. In experiments on animals it was further demonstrated that the brain discharges electrical currents even in the unconscious state under anesthesia.

The experiments are being carried on in the physiology department of the Harvard Medical School, under Professor Walter B. Cannon, one of the world's leading physiologists, by Professor Hallowell Davis, Dr. M. H. Lurie and Dr. H. A. Derbyshire.

The gray matter of the brain keeps sending out electrical currents, the demonstration showed, as long as the blood supply to the cortex is not cut off. As soon as the blood circulation is stopped the electrical signals are without.

The demonstration was made on a living conscious human being in complete repose in a dark room. Two metal electrodes were attached to the top and the back of the

skull. These electrodes were in turn connected to very delicate high amplification apparatus in another part of the building. This amplifier magnified the current 1,000,000 times.

Electrical Surges Are Held.

Attached to an audiometer these amplified electrical brain surges could be heard distinctly in rhythmic clicks. The brain dynamo was made audible.

In addition to being heard the brain currents also were made to write their own record on a photographic apparatus, after they were first made visible on the fluorescent screen.

The same experiments were conducted on anesthetized cats after the top and back parts of the skull had been removed. Here the electrodes were attached directly to the brain itself. In this case only a tenth of the amplification was necessary to record the electrical activity of the gray matter on the visual and audible apparatus.

The experiments are at present mainly conducted to determine the part played by the electrical activity of the brain in the process of hearing, in the hope of finding means of restoring their hearing power to 10,000,000 in the United States alone who now cannot hear.

When the human subject lay quietly with his eyes closed, the apparatus recorded ten to fifteen electrical brain oscillations per second. When the eyes were suddenly opened, and a visual stimulus was thus provided to the brain, the regular signals were either modified or interrupted entirely. A flashlight brought in front of the eyes caused a definite alteration in the automatically recorded pattern of the electrical brain signals.

The range in frequency of the electrical oscillations, Dr. Davis said, runs from one to forty per second.

Whether or not these facts may be interpreted to mean that the process of thinking and consciousness is purely the result of this electrical activity of the gray matter of the brain, would at the present stage of experimentation be pure speculation, the Harvard scientist stated.

The experiments, however, Professor Cannon said, have demonstrated the electrical activity of the brain on a much more definite basis than has hitherto been accomplished, though such activity has been suspected for the past few years.

were not my only listeners, for all I know. Probably I've been overheard."

"What does that mean?"

The commander grunted. "It means that one of these days I shall receive an invitation to partake in the transmitting of an exclusive augmemory. Officials suspected of holding views like the ones I've just expressed usually do."

"Then what?"

"The ordinary suspect doesn't know it, but I do. It's a pretext to record his memory reflection. If suspicions are confirmed, in the course of time a—well—an accident happens to him; a fatal one, usually."

"Father!"

Commander Davis bit his lip and jumped up. "Now, Ruth, there's nothing to worry about. Very possibly no one was listening. If there was, I'll find out who. Don't forget your father is Technicians-Commander. My favor means a great deal to young and ambitious technicians." He patted her cheek. "Go now, both of you—you mustn't keep me from my work."

And with a smile that was just a trifle too fixed, he ushered them out.

CHAPTER VI

A Tragedy

● All four felt it, but it was Dr. Stephens who condensed it into words. "Like," he offered, "one of the opening nights in an old-fashioned theatre." He accepted a cup of tea from his wife and paused with it in his hand. "Here's to Howard August, surface-level orator!"

Ruth, matching his sip, put down her cup with a shake of her head. "Goodness, how one's world can turn completely over! And within so short a time! Two weeks ago when we set out for a stroll, we never dreamed we'd be doing this."

"Turned completely over is right," said Howard. "I'm glad to say we're standing on our feet now."

Ruth turned to the bald-headed man. "Did you know from the very beginning how Howard was, even before we told you?"

"Yes," Dr. Stephens smiled. "In certain facial characteristics he resembles his father very closely, the youthful Charles August especially."

"We're all set," said Howard. "Shall we go now?"

"Just one moment," put in Mrs. Stephens, "until I get these things into the kitchen."

"Certainly, Elizabeth," replied Dr. Stephens, rummaging in a bureau drawer. He took therefrom an ancient steel revolver and was slipping it into his pocket when the gray-haired woman returned.

"Frederick," she cried. "What are you doing?"

"Nothing, dear. Merely taking it along as a bluff—in case rowdies get out of hand."

"I don't like you to carry such things."

Dr. Stephens raised his eyebrows. "Why, I don't know whether it's loaded, even, Elizabeth." He smiled. "You know I'd never use it even if it were."

"Of course." Mrs. Stephens took his arm. "Ready, you two?" Ruth and Howard nodded. "Then come." As they went into the hallway, Mrs. Stephens said to her husband, "You old fake, you."

Howard wondered at himself as he spoke. The first introductory minutes he had been nervous, conscious of the microphonic wires under his clothes. The wires were connected by a metal button on the sole of his shoe with the amplifier Dr. Stephens had built into his selfmobile. Now, however, he was quite at ease. But there was about surface-level speaking a strangeness he had never experienced before. One half of himself, detached, thought about petty, foreign matters. It was alive, critical of what the other part was saying, and exceedingly nimble. The other part talked. Vaguely it knew what it was going to say, glimpsing—as a pilot through a mist the landmarks of a harbor his ship is entering—certain salient points, which eventually it reached and passed. He was within himself speaker and hearer.

The nimble part of him was oddly alert. It darted over the upturned faces of his audience of selfmobilists, marking indi-

viduals. In the front ranks, for instance, was a face like caricature, beak-nosed and weak-chinned. And there was a man who belonged, from his carriage, above the hundredth floor. Disturbing notes—there, at the rear, hoodlums, who from their gestures, were making burlesque of him.

Without needing to look, this alert part knew that Mrs. Stephens was beside his selfmobile, folding leaflets. It picked out the wandering bald head of her husband, who was handing out printed sheets, and dwelt on Ruth sauntering through the crowd—she, too, was distributing leaflets. It felt a thrill of foreboding as she reached the hoodlums, but commended the cool, serene manner with which she dealt out to them the leaflets. When she turned away, and the foreboding was about to be fruitless, it felt relief. Then one young man in an over-brilliant jacket caught her arm and swung her about, saying something. Howard could not make out the words, but he heard the other hoodlums guffaw and saw Ruth stiffen. And all the while the other part of him kept talking.

The incident at the rear had attracted the attention of near-by listeners, and other heads curiously followed the gazes of these first. The center of interest of the crowd began to shift. Realizing that his own intent stare was helping, Howard forced his eyes to the caricaturish face at the front.

When he could not keep from looking again, a moment later, Ruth was trying to shake off the youth's hand. Dr. Stephens had made his way out of the press and was circling around toward her. He came up and brought his fist down on the rowdy's forearms, breaking his grip. The youth lunged, striking Dr. Stephens on the face. The old man did not raise his hands. He was saying something. Howard heard the young brawler's shouts of laughter and snatches of his raised voice. "Like hell! . . . if I wanna. This is a free country!"

The little man replied gently. The gang of hoodlums laughed. One of them put his arms around Ruth's waist. Howard stumbled in his talking.

Mrs. Stephens twitched the leg of his trousers. "Don't stop. Fred will take care of them. Keep speaking."

Howard took up again the flow of words, watching. Dr. Stephens was tugging at the encircling arm. With the flat of his hand, the rowdy sent him sprawling. Picking himself up, the little man pulled the revolver from his pocket. The hoodlums, frightened, retreated before the weapon—all but one, behind Dr. Stephens, who sprang upon him, clutching at the gun. As the two men grappled, the weapon swung dangerously towards the crowd, now changed completely from audience to spectators. It pushed back, bumping into itself.

"Heavens!" cried Mrs. Stephens. She scurried around the crowd, shoved through the circle about the struggling men, and ran up to them. Shouting, "Fred! Give me that thing!" she attempted to wrest the revolver from his hand. The three flounced about. Abruptly, like a curfew taking instant obedience, there sounded a sharp "*crack*"—congealing movement. For seconds no person moved, except Mrs. Stephens, who, as if in languid prayer slid with bowed head to her knees, and then fell slowly, grotesquely, onto her face.

Leaping from the platform, Howard beat his way through sudden hubbub. Dr. Stephens was kneeling beside the body of his wife. He had turned her over and was clasping her in his arms. With parched eyes Ruth stared down at him.

"Police!" voices shouted. Like a pile of leaves kicked apart, the crowd, including the young brawlers, scattered.

Ruth looked at Howard and then meaningly up the street. He shook his head. Ruth nodded, then stared down again at Stephens.

CHAPTER VII

Accused

● The white-haired lady was dead—murdered, the state declared, and charged Frederick Stephens with the act. Howard, annoyed, waited for the authorities to correct their mistake.

Meanwhile, the newspapers cackled, for their deadliest heckler was pinned. They broke the story with full top spreads: "CHIEF ANTI-AUGMEMITE KILLS WIFE!" That they did not actually say "murders wife" was unimportant. Most readers read it that way, nevertheless.

They followed with subtly poisonous write-ups. From the fact that Frederick Stephens had carried a revolver, they evolved hidden arsenals. They stated, in questions, that he was a homicidal maniac. They made his extenuating circumstances seem the flimsiest of trumped-up evidence: "Dr. Stephens claims it was an accident. When pressed to explain, he replied, 'It makes no difference now.' He refused to say another word, but lounged in the corner in utter disregard of questions."

Howard boiled. He had been present at the jail during this interview. Where the print made Dr. Stephens out a caloused tough, the suffering old man had been gentle, and his answer, rising out of a profundity of remorse, sincere. He would sit quietly with his head in his hands for hours, unmoving, indifferent to everything.

Howard and Ruth, afraid for his reason, were dismayed, though not surprised, when they read of his attempted suicide. A guard had come by, cut him down, and revived him. The newspapers interpreted the attempt as "cowardice, indicating that Dr. Stephens was so certain of his guilt that he was seeking to escape inevitable punishment."

Howard fumed and fretted and visited the aging man, harrowing thus his heart, and awaited the trial to wash the mud away. But when it opened, he became aghast. Key witnesses for the defense unexplainably vanished. New witnesses for the prosecution miraculously appeared. He found that he was watching a clever demonstration by the prosecuting attorney, aided by the judge, of how to make bricks from mud. Between them they erected a seemingly solid structure, on which solidity the State's attorney declaimed convincingly for three-quarters of an hour.

The jury did not deliberate long. There was a hush while the twelve men filed in, broken by the muttered question of the judge when they had taken their places and by the foreman's loud voice filling the courtroom: "Guilty of murder in the first degree."

While Howard and Ruth stood tight-lipped, the judge pronounced sentence of death by asphyxiation on an indifferent Frederick Stephens.

In Howard's apartment, afterwards, Ruth took his hands and clung to them as if they were the only right things left in the world. "This morning," she began, trying to keep her voice calm, "father got an invitation to augmemize. Oh, Howard!" she cried. "I'm afraid for him . . ."

He was offering reassurances, hoping that they sounded as hearty as he meant them to be, when they heard the crying of "Extra!" in the corridors. He sent for a copy. It was more fodder, post-deed glee, for the newspapers. Stephens had attempted suicide again, which, of course, the editors once more laid to cowardice.

Howard flung the paper from him. "The beasts!" he cried. "Cowardice! . . . Can't they play fair now?"

"Howard," said Ruth, "that doesn't matter. He is sentenced to die, and shall unless something happens."

"What can happen now? It's too late."

"Not for Charles August to do something."

"My father? Why—"

"Ask him."

Howard stood up. "Come with me, Ruth."

Charles August, however, was already interfering, though in a manner neither Howard nor Ruth would expect.

CHAPTER VIII

The End of August

- He had been slouched listlessly in his austere chair, pen idle in lethargic fingers, when, with a shrug, he pressed a button in one corner of his desk. There came in response a timid knock at the

door, and Stetson entered. Charles August turned his head indolently to look at the bespectacled secretary as he stood clutching pad and pencil like ineffectual shield and sword and asked, cringe draining his tones, "Yes, sir?"

"Stetson," Charles August murmured. "Are you clever?"

"Well," replied the other, uncomfortably, "I don't hold myself up especially over other men, but I do think, sir, I am more clever than the average man on surface-level, let us say."

"Let us not say. Instead let us see—that is, let me see. You won't, of course." He watched drowsily the other's bewilderment. "I am going to set you to a problem. Give me your solution . . . I am bored, Stetson."

"What is the problem, sir?"

"Dullard, I have stated the problem. I am bored, bored to death. Boredom is not pleasant, Stetson. Life without a certain minimum of zest is the equivalent of death—life, that is, without the capacity to experience emotion, sorrow too, not only joy. It would be a pleasure—actually—to worry, rather than remain so blasé. That's the problem. I want to be entertained. What do you suggest?"

"Why, that's easy!" Stetson was grinning. "Augmemory, sir."

Charles August sighed. "Your brain is on a par with that of the man on surface-level. Your answer is his. Do you know the meaning of the word 'saturation'? Well, I have soaked in so many augmemories that the point of saturation has been reached. I can soak in no more. They bore me."

"But Mr. August, we have some new ones that I'm positive will thrill you."

Charles August leaned forward. "Yes? What are they?"

"We have the augmemory of the explorer who traced the Orinton to its source. He had many terrible experiences, sir."

"Another explorer, eh? They tire me. I have been attacked so often by water buffaloes and lions, and swung a machete so frequently through thick jungles that

they do no more than annoy me, and that not very deeply. Forget him. What else?"

"The augmemory of John Hines, whose plane failed in the stratosphere last week. His parachute fouled and did not open until he was five hundred yards above ground. It was so terrible an experience that he's had a nervous collapse. His augmemory will be sure to thrill you."

"Stetson, I was thrilled the first time I took on the memory of a falling airman. I felt the pounding of the heart, the rush of air, the sense of imminent death. That, Stetson, was the first time. You know how many times I have tried them since." He lifted a lax hand. "Please try to remember the word 'saturation.'"

The clerk shrugged. "Well, sir, I'm afraid, then, there's none you haven't had several times already."

"So! Your cleverness resolves that I continue to look at the ceiling."

"Well, sir, if augmemory can't help you, nothing else will."

"Nothing else. That is right. But augmemory shall help me, only not your tedious ones. A new augmemory, something which has not been tried before, for it is forbidden by law."

"You don't mean, sir—"

"I mean the augmemory of a murderer."

"There's the law, sir."

"Now, Stetson, you are becoming really stupid." Pressing a button, he bent over the desk phone and said, "Get me the Seventh District Prison."

Stetson, cringe in the sag of his frame, listened. His chief then said, "Hello, Warden Auslander? . . . Do you know who is speaking? . . . Right. . . Fine, thanks. I want you to do me a favor. Send Fred Stephens to my office. . . . What? . . . I know that. . . . Well, too bad, but as long as you feel that way about it, Warden Auslander. By the way, I want your opinion about a little matter. The Governor asked me what I thought about having the grand jury investigate our prisons. There's rumors of drug trading, officials implicated. Something about an unaccountably large bank

balance with the Syndicates Trust. What would you suggest. . . . What? About who? . . . Stephens? . . . Oh, I see. That's nice of you, Warden; I'll keep it in mind. How soon will he be here? . . . Fifteen minutes? . . . No, he is not going back to you. I'll take care of that. One moment—"He beckoned to his secretary. "Plug in the editorial circuit and tell them the Governor has advanced the date of Stephens's execution to to-night. Tell them to feature death-chamber eyewitness stories. Send a letter to the Governor telling him what he's done. Yes, Auslander. . . . What? . . . Oh, of course. . . . Yes, the investigation would be an unnecessary expense to the state. We must keep the budget down. . . . Yes. . . . Bye-bye, Warden. Thank you."

Before the allotted fifteen minutes were up, Frederick Stephens plodded through the doorway. He walked slowly up to the desk and asked, "What do you want with me?"

"You are not civil," replied Charles August. "You should ask my health."

"What do you want with me?"

"Won't you sit down, Frederick?"

Silently, Dr. Stephens took the chair indicated. His face was thinner, more wrinkled. There were heavy lines under his eyes and at the corners of his mouth. He was older.

"I have had you brought here for a very simple reason," said his former classmate. "You always did like bluntness, so here it is. I am bored, sated with the augmemories I have been getting for the last few years. I want something new, something so different and so powerful that it can make me react."

Dr. Stephens listened quietly.

"You are a murderer," Charles August continued. "You are not the usual one, for you are very sensitive. You feel for your wife. You must, since you have attempted suicide because you killed her. You *feel* like a murderer. I want to know what that is like." He smiled slightly. "Do you object?"

Dr. Stephens was looking at him strangely. "No. I'm glad."

"You intrigue me, Frederick. I'm actually curious, and it is like a breath of new life to feel even that . . . Stetson!"

"Yes, sir?"

"Augmemory. Direct transference."

"But that means, sir, you must take his full memory. As you know, we can't segment direct transference."

"Do as I say!"

• The secretary bent over a cabinet in a far corner and took out a black metal box which he placed on the desk between the two men. On one vertical face, like a child's drawing of eyes and nose, were two flip-switches and a dial. Below these—the teeth—were metal-rimmed holes. From the cabinet he brought the headbands with their trailing wires and adjusted them on the two men, inserting the prongs at the ends of the wires into the metal-rimmed holes. He plunged a plug at the end of a thick wire, which came out of the top of the box, into a socket in the side of the desk. Then he snapped down one of the switches. The box coughed once, twice, and settled down to a sustained growl. He gripped the dial and asked, "How much, sir?"

"Full," replied Charles August. "One hundred."

Stetson's thin shoulders thrust forward, remonstrative. "You've tried as high as eighty, and once eighty-five, but never beyond, sir. It's dangerous."

"I know my machine, Stetson. I said full, one hundred."

The secretary twirled the dial to the right. The growl deepened. He placed a finger on the second switch. "Ready, sir."

His chief looked at Frederick Stephens. "Are you?" The old man did not reply. His head-band seemed a black bandage staunching a scalp wound. Charles August slouched down comfortably in his chair. "All right, ready."

It was quick. The finger pushed down, stayed several seconds, and lifted. The growl stuttered, then steadied. Stetson threw out the first switch and the box became lifeless. He unstrapped the band from his chief's head, which lay still

against the back of his chair; and from Dr. Stephens, who blinked, and looked at his former colleague.

The latter opened his eyes, saw Stetson. Lifting his hand, he said, faintly, "Go away." The clerk retreated, halting by the door.

Charles August turned his head and stared at Dr. Stephens, his forehead wrinkled. Minutes ticked away as he sat staring and Dr. Stephens quietly gazed back. At length, he did a strange thing. Leaning forward, he pressed Dr. Stephen's hand with both of his own, so gently that it was a caress.

Frederick said, "You see?"

Charles August nodded sadly. With a sigh, he went to the wall-length windows and opened one. The secretary started towards him, solicitous.

"Go back," whispered his chief. As Stetson stopped, a buzz signalled someone at the door. Charles August said, "Never mind. It doesn't matter." He was standing on the sill, his figure black against the blue of the sky.

Frantic, Stetson leaped, clutching. Cloth and silky hair brushed his palms—and the casement ledge framed uninterrupted blue. He crouched there, dazed, while Dr. Stephens sat unmoving, until the buzz sounded again, breaking into the stillness. Stetson moved. He fumbled with that button on his chief's desk which released the lock.

"What's the matter?" cried Howard, pushing open the door. "If you're busy, tell me; don't keep me waiting."

"Nonsense, dear," said Ruth. "Can't you see something's wrong with him? What is it, Stetson, aren't you feeling well?"

The secretary made vague motions at the open window. "Your father . . ."

Howard said, "What?" Then he noticed Dr. Stephen's bald head above the back of his chair and exclaimed, "Fred-erick!"

The old man called, "Come here." He swung around in his chair and looked up at the young couple. "Your father has committed suicide, Howard."

Ruth cocked her head at the window. He nodded.

"Why?" asked Howard.

"Remorse."

"Charles August?" retorted Ruth, disbelieving.

Dr. Stephens indicated the black box. "He wanted to know what it was to be a murderer. He took my memory on direct transference, in full intensity. So I know."

"Yes," Ruth said, and after some moments, "What will happen to you now? We were going to ask him to help."

"It makes no difference," Dr. Stephens murmured.

Howard, who had been standing with bowed head, drew himself up. "But it does," he said.

The old man, his face in his hands, gave no sign of hearing.

"I'll see what I can do," the young man continued. "I'm in control now."

"Will they accept you?" Ruth queried.

"I think so." He put his mouth to the desk phone. "Get me the editorial circuit, please. . . . Hello. Who? Publications-Director Hubert? This is Howard August. My father has been accidentally killed . . . Not murdered—killed You'll do what? Send men to verify?" His voice was rising angrily, and the old man looked up. "Isn't my word enough for you? . . . It isn't? You never acted like this before, my dear man. The sudden change won't do. I'm letting you know now."

Twisting a knob, he cut the phone dead.

"Who was that?" demanded Dr. Stephens.

"Publications-Director Hubert."

"Hubert!" Dr. Stephens bellowed, not in the least apathetic. "Have you lost your mind?"

Ruth glanced at Howard and pressed his hand happily.

"What do you mean?"

"What do I mean!" groaned the old man. He waved his arm at Stetson. "First dismiss that pitcher; it has ears." When the door had closed behind the secretary, Dr. Stephens cried, "Do you know what you've just done? You've laid yourself

wide open to an attack by Hubert's crowd. You've just told them that the time they've planned against has come, the time to take over augmemory and get control of the reflections for themselves. Now they'll be trembling, every one of them, until they know they've got us where we can't expose their crookedness."

"Dr. Stephens," reminded Ruth, "no matter what happens, you've got to go into hiding without delay."

"Quite unnecessary. Charles took care of that in his own fashion. Tonight the newspapers are going to print eye-witness' accounts of my execution."

"Not bad," Ruth observed. "And much better than some other ways."

Then the buzzer made a noise, and Howard pushed the release button. Technicians-Commander Davis ran in, his forehead wrinkled in anxiety.

"I got word you were here," he panted. "What's happened? Hubert's calling certain technicians to a secret conclave. . . . I've learned that a good number of politicians will be there. What's up?"

"Charles August is dead."

"Oh, I see!" He frowned. "What are we going to do now?"

"I don't know," replied Dr. Stephens. "But whatever it is, ten heads can decide better than one. Get together those who'll stick with us. Have them meet in the Central Control Room."

With a motion of his head, Commander Davis left.

Dr. Stephens paced up and down the room, his face working. "Do!" he grumbled. "What can we do? They outnumber us twenty to one. They can destroy us—*pouf!*—like that."

"Then why did you send for the others?" demanded Howard. "Why put anyone besides ourselves in danger?"

Pausing before him, Dr. Stephens clapped a hand to his shoulder. "Good for you, boy." Then he resumed his pacing, his face grim. "Because," he explained, "they will be found out anyway. The first thing the politicians will do when they succeed will be to augmemize the entire staff and clean out their foes."

CHAPTER IX

A Changed World

• Within an hour, three score persons had assembled in the Central Control Room. More than half wore the blue uniform of augmemory staff scientists. The rest were professional men, doctors and university professors bred in pre-augmemory schools. There were also several politicians—among them a judge—whose sense of honesty had been strong enough to overcome their fears.

Dr. Stephen's bald head moved through them to the desk in the middle of the floor. As he mounted the chair, they became quiet.

"You all know why we're here," he announced. "It's only fair to warn you that our enemies are even now organizing themselves. They won't feel safe until every one of us is dead or in prison. We could barricade ourselves in this room, but it would be useless. We could attempt violence, but that would mean a few of them killed and probably all of us—and nothing settled. If we fled, we would be admitting that the thing is too much for us. I, for one, prefer to stay, whatever arises. But if any of you wish to flee—" he pointed to the door—"now is the time."

Amidst an eloquent silence, one man detached himself from the crowd and shambled towards the exit. As he left, a voice whispered after him, "For shame, Boklan!" Not another in the set-faced scores made a move to go.

A smile played in the corners of Dr. Stephens' mouth as he looked down at them. "You have chosen!" he exclaimed proudly. "And you have chosen bravely. Now rack your heads for a way out. Any ideas?"

A blue-clad youth jumped forward. "As long as we hold the Central Control Room," he cried, vehemently, "let us cut off all augmemory, as an act of defiance."

"No," Technicians-Commander Davis disagreed. "There's no need to let them know where we are. We can gain time by letting them find out for themselves."

There was a hum of approval.

"Any other suggestions?" asked Dr. Stephens.

Brows furrowed in worried thought, but no one had anything to offer.

"If you'll excuse me," said Technicians-Commander Davis, "I'll get ready for the three o'clock augmemory in the meanwhile. It's two-thirty now."

Howard, who had been sitting on the edge of the desk, chin on fist, sprang up. "That's it!" he shouted.

"What?"

"Look here," he explained, as they gathered around him. "Why do our opponents want to get rid of us? What are they afraid of? That we'll use the reflections to expose them. Am I right?"

"Well, as much as you can be about so complex a thing as human emotions," allowed Commander Davis.

"Now, if we give them assurance that every single one of the reflections will be destroyed, assurance they could not doubt, they would no longer want to get rid of us, would they? And if in addition we made them believe that we don't intend to blackmail them in any way—as indeed we don't—they'd have nothing left to fight us for."

Several score heads nodded in agreement. Ruth watched him with shining eyes.

"They haven't been crooked for the love of it," he argued. "No man does what he knows is wrong but that he hates himself for it. These men have cheated because they have been forced to. If they had the chance to live straight, they would probably be happy."

One of the politicians, the judge, grunted understandingly. "It would be like being born all over again," he stated. "Deep down in their hearts, they must be sick of the rotten mess."

"Then the question is this," Howard went on, gazing around into their faces. "Assuming that you had the power, would you want to punish them for their past crookedness, or would you be willing to accept them as useful members of society, which they can be?"

"We are civilized people," protested a

white-haired doctor indignantly. "There can be no question that we would accept them."

"Then—if we haven't missed up in our assumptions, somewhere—our problem is simple. Remove fear of exposure—that's step number one. Step number two is to show them the justness of our cause, so that they won't be able to feel anything towards us but sympathy."

"But they're prejudiced," sputtered a blue-clad youth. "They won't listen to you."

"They'll listen in spite of themselves."

"Why should they?"

Howard looked at his wrist-watch. "In twenty-five minutes they'll be taking the three o'clock augmemizing. Instead of the scheduled cylinder, we'll hammer our ideas into their brains by transmitting in full intensity the augmemory of one of our own men."

"That might do it," Dr. Stephens admitted. Then his face clouded. "If we can squeeze it through. There's little time."

"Who's the man?" demanded Commander Davis immediately.

"It must be someone who's absolutely straightforward and sincere," replied Dr. Stephens. "And at the same time we can make it the man our blinded enemies fear most—Howard August, sit in that chair."

"Connars!" barked Commander Davis, as Howard sat down. "A fresh cylinder in Number 9—quick! Seagram—prepare your developing tanks."

The two staff scientists ran out to their stations in adjoining rooms.

Technicians-Commander Davis, planting himself before Number 9 panel, twirled several knobs, his eyes intent on the dials, while an assistant clamped the electrode band to Howard's head and thrust the prongs into sockets in the desk.

Smiling up at Ruth, Howard asked, "Are you going to forgive me this augmemizing?"

For answer, she bent over and touched her lips to his.

Two green lights flashed on Number 9 panel.

"Ready?" called Commander Davis.

"Ready," replied the assistant.

The commander pulled down a switch, waited several seconds, then thrust it back. He looked around and waved a hand at Howard. "That's all."

● The assistant unstrapped the headband. Shaking himself like a puppy just out of water, Howard got up. There was a red mark on his forehead.

"Are you all right?" asked Ruth.

"Just a little dizzy. That's all." He glanced at his watch. "Twenty minutes to three. Dr. Stephens, how long does it take to complete the cylinder?"

"Usually a half-hour, but they may be able to cut it down." The old man ran a worried hand over his bald head. "I hope your idea works out, Howard. If it doesn't, we're lost."

"At any rate," said Howard, turning to Ruth, "your father's as safe as the rest of us."

The buzz of conversation fell off as the minutes ticked away. At the control-board, Commander Davis stood with the heel of his palm against the head of a plunger, which, when pushed in all the way, would start the transmission. "Five minutes to," muttered Howard. The room had become absolutely still. All attention was focused on the commander's tensed arm. Then, with only thirty seconds leeway, a bulb blinked redly on the board, and Commander Davis shot home the plunger.

"Well, that part's done," commented Dr. Stephens. "In thirty minutes we'll know from their reflections what our enemies' plans were—that is, up until three o'clock. As for afterwards . . ."

Time is constant only to unemotional conglomerations of metal parts, such as clocks. To men whose destinies are locked within an approaching hour, minutes stretch into eternities. Thus it was to those who waited behind the locked door of the Central Control Room. Until three-thirty, however, they were still able to jest occasionally, among themselves. Then, when they learned from the staff scien-

tist who had taken on one of the reflections, what their enemies' plans were, their faces became truly grim.

The man Boklan, who had fled at the first smell of danger, had betrayed their whereabouts. And at four o'clock, their foes, armed with annihilator guns and deadly "Y"-gas bombs, were going to storm the Control Room, with orders to kill every person found inside. Thus, at least, the plans stood at the time of the augmemizing.

Dr. Stephens laughed shortly. "I am almost glad that they intend to slaughter us. It makes it scientifically correct, as an experiment with augmemory."

"Isn't that rather cold-blooded?" deplored Ruth.

"No. There's more depending on this than just our skins. Don't you see—"

"Just a moment," interrupted Howard. "Let the others hear this."

Obligingly, Dr. Stephens mounted the chair. While three score faces looked up at him, he repeated the first few words and then went on, his voice raised.

"Don't you see, what we've done in this instance is to use augmemory as we hold it should be used. If it succeeds, we'll know that all we need to do is to use it exactly as we have done now—only on a world-wide scale—to achieve our longed-for Utopia of a world without lies, without quarrels. It will be only a matter of detail, hunting out misunderstandings and hatreds to evaporate away by mingling memories. Our enemies, if they are converted, will be invaluable, for they can lend official sanction to the work. That work, however, will be extremely simple. The all-important thing, on which hinges not only our own hopes and our own lives but the future trend of our race, is whether we succeed in this instance. What comes afterwards—if we do succeed or if we don't—we can see plainly, and at this very moment doesn't matter much. The decisive thing is the experiment."

Then his voice swelled until it rang against the walls. "But we must give it a fair chance. When our enemies come through that door, one thing can destroy

the friendly impression we hope to have given them in a split second—and that is the sight of weapons on any one of us. We must, therefore, divest ourselves of every piece of arms we carry.”

“That would leave us completely defenseless—at their mercy,” blurted someone in protest.

Dr. Stephens smiled bitterly. “What difference can it make to us if we retain our weapons? Every one of us will be killed nevertheless. The only thing is that we shall die knowing we have taken some of our enemies with us. Call that consolation if you will—I call it part of a childishness we must forget—the feeling of ‘all right, scratch my face; at least I will have pulled your hair.’ We—more than any other group of people at any other time—must rise above such trivialities and be men. This experiment can change the mold of all humanity. Shall we sacrifice it for petty revenge? Let your answer be ‘No’ and disarm. You have nothing to lose and a new world to gain.”

Stupefied silence followed his words—to be broken after a minute by a stutterish *cl-clank*, as an annihilator gun slapped against a wall and dropped, discarded, to the floor. It was the prelude to a storm. Other annihilator guns showered in a metallic hubbub upon the first, burying it beneath a glittering heap. “Y”—gas bombs, with safety-pins locked in place, rolled along the floor and thudded against the pile. Several old-fashioned revolvers added their blue glint. The last gun had just sailed through the air, when, announcing that someone was at the door, the buzzer began to chatter. Howard looked at his watch—four o’clock.

“Open,” commanded Dr. Stephens, chin high. He was at the forefront. The three score within the room had gravitated to the far end where they became transfixed with their sixty pairs of eyes glued upon the door.

Howard, who was nearest the desk, hesitated.

“Open!”

Howard placed his finger on the release button and pressed.

Slowly the door swung wide. The defenders saw a single squat figure in the doorway, one hand clutching an annihilator gun.

“Publications-Director Hubert,” whispered Dr. Stephens. Howard made a motion towards the heap of discarded weapons, but Dr. Stephens restrained him with a gesture. Deliberately, the man in the doorway began to lift his gun. It was halfway up when an annihilator pellet flashed. He spun around, as if an invisible giant had slapped him on one shoulder, and crumpled to the floor. Dr. Stephens whirled around in a towering rage to see which of his men had weakened. They were themselves staring at each other blankly.

● When he turned around again, there was a knot of strangers standing just within the doorway. Beyond them could be seen the helmets of many more. Their pouches bulged with bombs. Each of them held an annihilator gun. And from the muzzle of one of the foremost ones rose a telltale wisp of smoke.

They stood thus, with the gleaming expanse of floor between them—while the armed men glared and the defenders, their weaponless hands clenched against their sides, braced themselves for the crash of the first gas bomb, the shock of the first annihilator pellet.

The roving eyes of one of the strangers lit upon the heap of arms by the wall. He glanced searchingly at the defenders, then back at the discarded weapons. An eager smile overspread his face. He strode to the pile, and with a gesture of repudiation, dropped gun and bombs onto the heap. At first, one by one, then in bunches, his men did likewise. The leader, turning to face the defenders, raised his arms, palms outward, in the universal signal of peace.

While the two forces, like slaves freed forever from oppressive taskmasters, ran to mingle with glad shouts. Dr. Stephens became wrapped in gloomy reflection.

“Anything wrong?” asked Howard.

(Continued on page 234)

A THIEF IN TIME

(A Short-Short Story)

By

RAYMOND A. YOUNG

● "Simple, now isn't it?"

Tony Carponi looked at the old man that sat opposite him with narrowed eyes—small and bony, long gray hair that curled around the collar of his shirt, his eyes sunk in deep hollows gleaming back at him.

Tony was tall and straight, his coal-black hair shining under the bright lights of the room. He was young; he had his full life before him, but his love of money was even stronger than that of his life.

"Now, let me get this straight, mister." Tony did not even know the man's name. "You're going to give me fifty grand just to step into that—er—box over there?" He tossed his head in the general direction of a maze of wire and box-like affairs.

"That is right," the other nodded. "And all you will have to do is follow the instructions that I gave you."

"But how do I know that the thing won't kill me?"

"Mr. Carponi, you have my word as a scientist that my apparatus will do you no harm. It will be an absolutely harmless test to prove the practicability of my machine for human transportation.

"It will transport you, through a process which I have perfected, to another part of the city. From there I want you to walk to the house of a friend and obtain a small lead tube which he has of mine. Be sure to follow the directions that I have already given you. . . .

"Here is your fifty thousand dollars . . . it is yours when you return."

Carponi's hand reached instinctively toward his arm-pit and then he thought better of it. Here this old man was trusting him, although he probably knew that

he was a petty gangster. After all, it could do no harm to follow the man's instructions and gain the fifty thousand honestly.

"O.K., mister," he said. "Let's get started."

"That's fine, my boy," the old man responded, getting to his tottery legs. "Now if you will step into this enclosure—"

Tony did as he directed. Instantly, the scientist began to whirl various dials on a control board and brilliant lights began to blink. "Remember now," he heard the old man saying as from a distance, "in a moment you will find yourself in an apartment. Go out doors and walk one block north till you come to the house which I have told you about. Tell the gentleman there that 'Ray' sent for the lead tube."

The voice was becoming fainter and fainter until at last Carponi could no longer hear it. He struggled with an overpowering urge to sleep. The room, the light, the figure of the scientist bending over the dials seemed to fade into darkness. Tony had lost consciousness.

Tony Carponi awoke with a start. The familiar room with all the wires and tubes was gone. He was sitting on a bright metal disk in the middle of a well-furnished apartment. Must be one of those swanky, ultra-modern affairs, he mused to himself as he looked around, for he could hardly recognize the furnishings.

A modernistic clock on the wall chimed three times. This puzzled Carponi, for it had been morning yet when he had stepped into the machine. The thing was probably wrong, he finally decided.

His interest in the room, however, was broken when he remembered his errand. He stood up and went through the door of the apartment into the hall and out into the street.

And then he received a shock.

The first thing that attracted his attention was an airplane that zoomed perilous-

ly low overhead. Yet it was like no airplane he had ever seen before. It was gone, however, before he had time to study it closely.

The second thing that struck him as peculiar was the arrangement of the neighborhood. Neat rows of buildings, almost identical to the one he had come out of, lined both sides of the street. He mentally took down the number of the apartment he had come out of to make sure that he could find it again. The street also looked queer and wholly unadapted for automobiles. Above the ground, about ten feet, ran a triple row of tubes that resembled those of neon lights closely.

This was probably one of those model sections of the city that people were always talking about building, Carponi reasoned. At least, he had never seen it before. Anyway, about a quarter of a mile down the street on which he was standing was a highway intersection on which a steady stream of cars whirled by. That was reassuring.

Once more remembering his errand, he turned north and walked until he arrived at the building with the number which the scientist had given him.

Inside he was struck by its resemblance to a bank. There was but one person in the room and he stood behind a glass-like enclosure. The man raised his eyebrows quizzically. Tony thought that he was dressed rather queerly.

"'Ray' sent me," Carponi began.

"Yes?" the other responded.

"Yeah, the tube, the lead one, you know."

"Oh, the *lead tube*?"

Tony was watching the other closely now. Funny, he thought, but the fellow was acting exactly like a teller once did when he had held up a bank. He reached for his gun, through force of habit, and then drew it as the man moved his hand over to a row of buttons.

"No you don't, mister," he commanded, sticking the heavy automatic against the glass. "Now let's have that tube, and be darned quick about it!"

The man behind the glass cage looked

at the gun as though he had never seen one before, but evidently came to the conclusion that it would be safer to obey. He opened a heavy steel door and lifted out a small, tremendously heavy lead tube which he handed through the cage to Tony.

"Thanks," Carponi said, slipping it into his coat pocket.

He hadn't taken two steps out of the door before the air was filled with the din of sirens. He began to run. Finally he looked back and saw the man that had handed him the tube run out of the door and point a long, slender pipe at him. The next instant the ground a few feet away bulged up and a terrific detonation split the air. Tony was knocked to his knees but he was up again quickly and darted into the protection of his apartment building.

Once inside, he rushed to the apartment in which he had arrived. The metal disk in the center of the room was glowing brightly, he noticed, but he did not hesitate in leaping upon it. In doing so, he vaguely noticed that another person was in the room and that the figure was strangely familiar. . . .

* * *

Back in the scientist's room, the old man turned away from a screen which he had been watching and rubbed his hands gleefully

● Five, ten, twenty years passed and Tony

Carponi had become a success in life. The fifty thousand dollars he had quickly doubled and then tripled in shrewd dealings in the stock market. He had bought a radio company and was now one of the nation's biggest men.

But regardless of his vast amount of wealth, Tony still liked to live moderately. Thus it was he spent most of his spare time in a small apartment in New York's newest suburb.

His health, too, he had been careful of. He exercised every day and watched his diet. He felt pleased then, when friends remarked that he looked ten, even twenty years younger than he was.

(Continued on page 235)



(Illustration by Schneeman)

I had never struck that little white world with more than two successive concussions;
now I would send them out wave on wave. Would my interfering
frequencies confuse the electron dance?

THE WALTZ OF DEATH

By P. B. MAXON

PART III

Conclusion

WHAT HAS GONE BEFORE:

● Mat Telfer, while listening to his friend, Dick Straith, play a classic on the piano during a gathering of acquaintances, suddenly jumps in his chair and falls over dead. Upon medical examination, no cause can be ascertained for his sudden demise. Telfer was in perfect health and was certainly not of the nature to commit suicide. So, it is decided that he was murdered, but this seemed ridiculous, as no one knew of a motive that anyone could have for murdering him. Lander, who tells the story in the first person, an expert criminologist, is just as baffled as the rest, though he suspected a profound mystery from the very first, long before the others had sensed anything unusual. One amazing fact is discovered. Against the law of gravitation, powdered aspirin was sprayed *up* from the dead man's pocket, the cover of the box being wide open—it could not have fallen open and certainly Telfer would not leave a box of powdered aspirin open in his pocket—and the spray was *upwards!* The police can find nothing and a prominent inspector, LaVarre, finds himself amidst a most difficult case. Though Telfer had never been very popular, no one of the crowd present at his death had anything against him or was of a murdering nature. Lander learns from a friend that there is a poison which loses its identity when mixed with aspirin, but retains its deadliness. This seems to fit in very well, except for that *upward* spray on Telfer's coat. A light suspicion falls on several of those present, although there is nothing convicting—merely very vague clues. However, the autopsy is performed, and the death is reported to be from apoplexy.

However, Krausemeyer from the insurance company—with Dick Straith as the beneficiary—had just come into the case and found that Telfer's body was torn inside by some mysterious force. Meanwhile, Maria, Dick's sister, is kidnapped and Lander receives notice from Telfer's former partner, who had taken the girl, that she would be released as soon as a little red book found in Telfer's pocket by Lander was turned over to him. The book con-

● We present herewith the conclusion of the best scientific murder mystery we can ever remember reading. This is the novel, you will remember, that was awarded Honorable Mention in the *Liberty Magazine* contest of last year. You will notice that the literature of this story is far above the usual run of "pulp" material, as all the classics that appear in the more popular magazines should be.

But we are more concerned with the fantastic theme of the story. We have here a real scientific murder—a greater mystery than you find in the ordinary detective thriller, for it is brought about by such a weird method that the story can be called nothing less than science-fiction.

The mystery is yet to be solved, of course, and you will find the solution one of the strangest and most fantastic revelations of science-fiction.

The characters in this novel have become old friends to you by now, and you will not like to leave them. The author has made each one a living, realistic individual. If you like an occasional bit of good mystery—and who doesn't?—you will find the present story hard to equal.

tained important business information in code concerning Telfer's secret narcotic trade with the unknown man. Lander is relieved that the demand is not greater, as it might well be, and prepares to return the little red book to its owner at a secret meeting, so that Maria could be returned. Meanwhile, Peg Duncan, one who had been in the room when Telfer died, had taken poison, either accidentally or on purpose, and this adds a new note to the mystery. *Now go on with the story:*

CHAPTER XVIII

The End of Krausemeyer

● Not long was to be my dalliance in the arms of that heavy sleep. Gordon awakened me past midnight with the aid of my jangling phone to tell me disconcerting news.

Krausemeyer had been found dead in his room at the Ambassador. John Haidley had been arrested by LaVarre and the inspector was mincing no words. He was prepared to charge Haidley with double murder, Telfer's death and Krausemeyer's too. I couldn't quite guess so suddenly what things LaVarre had to go on.

"He's at Headquarters now," Gordon informed. "That's where I'm phoning from. You'd better come down, old man."

He needn't have admonished me that; I wanted to see LaVarre. One of us was certainly wrong. Would it prove after all to be I?

Had the quick flicker in Haidley's eyes when I'd spoken of the "perfect crime" meant the thing I had sometimes feared? And why was Haidley suspected in the matter of Krausemeyer's death?—admirably violent Krausemeyer who'd said: "I go on, Mr. Lander. Krausemeyer has the head for such things."

At the station a few minutes later I made no attempt to see Haidley. Knowing the inspector's queer ways, it seemed best I should talk first with him.

Besides, I had to have his facts. He would likely be in no mood to confide them. Suppose he decided to tell me nothing, took the stand that he'd produce his facts in court. In that case Haidley's name—I thought of the proud Jane too—would be dragged for days through the papers.

LaVarre could balk me if he chose. He didn't have to reveal his evidence and I felt that he'd be hostile to me. There was only one thing to do—in some way I must force his hand.

He sat at the glass-topped desk across which he must in his time have glared at many a trembling criminal. He rose and greeted me when I came in, but not with his usual cordiality. It was not the hearty way in which he'd welcomed me on my call only yesterday morning. He'd gained the idea, I felt, that all along I'd known the things he was sure of now, and that I'd tried to balk him somehow.

I disregarded his cooler mood; he could keep his criminal scowl for others. But for just a second I wondered sinkingly

just exactly how much LaVarre knew. The thing to do with him, so far as this interview was concerned, was not to give him the upper hand. It would be time enough for that if he showed he had a case. Therefore I went after him coolly.

"I hope you know where you're going, Inspector."

"I thought," he replied with equal coolness, "that you might hope I don't."

He was regarding me with his best sphinx-like look. But there was sullenness back of it too.

"This time," I asserted, "I hope you do. Brow-beating the ordinary criminal is one kind of thing, LaVarre, and false arrest of a respected citizen is something quite different again. I do hope you know what you're up to."

I'd caught the passing of a faint shadow in his eye at the mention of John Haidley's standing; but he dropped a mask over it at once and answered evenly enough.

"Thanks, Lander—for the hope you've expressed."

"Hope isn't enough, Inspector. It won't pay the high price of a reputable citizen's good name. Your city treasurer would have to do that—" For a moment there was that wavering again in his eyes, but I didn't affect to see it and went on: "—and inspectors who make such mistakes sometimes prove costly luxuries. A demotion after all these years—"

He interrupted me there.

"Never you mind about me, Lander. I'm not a rooky, you know; you've worked with me a bit yourself. Do you think I'm as dumb as you infer?"

That came straight from the shoulder and it sent a chill through me too. It was true he was no common blunderer. What the devil had the man up his sleeve? As to thinking him dumb, I didn't. Nevertheless, I followed my course.

"There comes a time for all of us, Inspector, to make the one mistake. It's too bad you didn't choose for yours someone less likely to cause you life-long regret. There's a great deal of the Haidley money."

"You think I should stoop to that?"

"No, Inspector,—not stoop. But you're licked unless you're sure. It's only men without means who get railroaded to prove some official right. You'd better be sure of your facts, my friend; and you haven't got yours by a great deal."

I could see, in spite of his coolness, that this positive assertion affected him. He knew I'd been close to this case, and I hoped—however he chose to be hostile—that he must have granted me a reputation in the criminal field at least the equal of his own. I knew my words had some weight.

"No, LaVarre," I repeated, sensing that anxious look of doubt, "you haven't got them yet." I added by a sort of inspiration, "I don't blame you for thinking so, though."

It was clear there was doubt now in his eyes; though after his usual manner in interviews, he'd placed the light to his own advantage. I went on as though I knew his facts and were reviewing them in friendly manner.

"Of course it all hangs together very well. But there are one or two things you've overlooked that in time will make you appear rather amateurish, to say the least."

This was no unfair war I was waging, but a battle for Haidley's good name. Whatever I may have thought in the beginning, I was certain as the interview proceeded that LaVarre was not sure of his facts. If he wasn't, he had no right to subject John Haidley to even temporary disgrace in the eyes of thousands of people. It was that I sought to prevent.

"So you think," LaVarre said levelly, "that I'm just a poor rookie inspector who's trying to get along? Well what about the poison N—o—n? Did you think I knew about that?"

● He jarred me a bit with that, though I think I kept him from seeing it.

"I'd hoped so, Inspector," I answered quietly enough. "I'd hate to think you wouldn't know."

"But perhaps you think I *don't* know that it's concealable in powdered aspirin?"

Again I had to guard my look that he might not sense my misgiving. He hadn't been idle, this LaVarre.

"Evidently you do," I answered, "but that doesn't seem important."

"It doesn't, eh?" he snapped. "Not when such aspirin is found on dead Mat Telfer and John Haidley's carrying it in his pocket the same night? And not when Krausemeyer is found dead with powdered aspirin and your friend Haidley has just been to his room?"

He was responding here with telling blows and it was clear now that he wasn't talking idly. Powdered aspirin around Krausemeyer too! Gordon hadn't prepared me for that; very likely he hadn't known. And Haidley had been to that room! This too was surprising news.

Did LaVarre know too, I wondered, about the smear in the cover of that aspirin box that had sat on Telfer's dresser? Its disappearance must have been due to him. Had he found there Haidley's fingerprints, or wasn't he ready to tell me? I hoped too he didn't know that Haidley had bought aspirin only yesterday afternoon, such a few hours before he went to Krausemeyer.

He was waiting for my reaction.

"Well, proceed, Inspector," I said casually. "Surely you're not content with that?"

"Quite content," he declared, for I believe he'd sensed I was impressed, as impressed I certainly was. "What more could I possibly want?"

"I should want, if I were you," I said evenly, "to be able to prove the murders. It isn't enough that powdered aspirin should be found in all the places you speak of. Bentley thought nothing of it. You've rather got to prove, I would say, that it carried the poison as well."

He made no answer to that and I couldn't quite be sure whether it impressed him or not. I went on when he didn't reply.

"And since aspirin, as you say yourself, conceals this N—o—n, I don't see how

you're going to prove that N—o—n was in it."

"You don't, eh? Then you think Telfer died just for fun, and Krausemeyer I suppose, has gone over to see what's keepin' him."

"That's for you to say, Mister Inspector," I asserted. "I have my own opinions about it. I understood, however, that your medical examiner said it was apoplexy in the case of Mr. Telfer. In the case of my colleague Krausemeyer, I have no information as yet, and you haven't had your autopsy. I'd hate to take your 'facts' to a jury."

I gave him time to answer, but he only regarded my cynically.

"Of course you're more familiar with such matters," I added at last with purposeful sarcasm, "but I seem to have heard it said somewhere that motives are required in such cases."

Again, unless I was mistaken, there was that flicker of doubt in his eyes. But he smothered it and answered with some assurance.

"I thought you'd come to that. Well, as far as the Telfer end goes, there's two men and a girl. Haidley's been seen with her at times, you know, and when it came to women, this Telfer here was no fool. He was making headway I think, and your Mr. Haidley removed him."

"I see," I mused. "And was Krausemeyer in love with her too?"

"I'm not that dumb," he blustered. "Krausemeyer goes out for another reason. He'd taken the trail of Haidley. That's a little strange, I'll admit—for he's generally an insurance dick—but he took it anyway. And when he got too hot, there was nothing else Haidley could do. Once you're in, you know! So he gets rid of the insurance dick."

Krausemeyer an "insurance dick!" Even in the serious light of this thing that LaVarre was saying, I got a quiet chuckle out of that. Krausemeyer, one of the greatest minds, referred to by LaVarre as a "dick." With his dignity and his terrible temper, how Krausemeyer would have been scandalized by that! I

think it would have killed him of itself if he hadn't already gone.

"How do you know, Inspector," I inquired after thinking a moment of that, "that there mightn't have been other motives held in other directions, much more pressing than the one you're considering? Haidley wasn't the only person who might not have liked Mr. Telfer."

"There's no motive that equals jealousy," he affirmed.

What would he have thought, I wondered, if he could have seen that look of Dick's and the fear in Telfer's eyes just a moment before he died? What would he think moreover had he known that for weeks Telfer had been terrorizing Peg Duncan and on the verge of wrecking her life?

"Just the same, Inspector," I resumed, "I'd hate to take your facts to a jury."

"You don't have to, Lander," he snapped. "That's my job, and I'll take a chance on it, too."

I left him sitting there well satisfied with it all, I think.

He'd thrown together a damning suspicion, yet I couldn't believe he was right. One had to admit his logic, though, besides the additional facts I knew myself of Haidley's purchase of aspirin yesterday, and the geranium pink smear that corresponded so exactly to the sunrise colors in his canvas. The Telfer affair likewise had gone even farther than LaVarre seemed to know, as the Dean had made clear to me yesterday.

But unless LaVarre were sure of his facts—and I'd seen that he by no means was—it wasn't thinkable that Haidley's name should be dragged for days through the muck. Yet the possibility that LaVarre was wrong was one thing; proving it was something else.

I scarcely knew where to turn, but I thought of Maitland then. He'd spoken about N—o—n on the chapel steps there this morning. He'd "been learning about N—o—n," he said. There had been something significant, I thought, in the way that Maitland had said that. I hadn't grasped it at the moment, my thought di-

verted by LaVarre who had just then gone up the steps. I decided to go to Chris now.

● Gordon, when I'd explained LaVarre's intentions, gladly shouldered the tough task of keeping the story temporarily away from the papers. He could make LaVarre see too, he thought, the ridicule this step might bring him if it turned out that he was wrong.

"Tell him I'll be back, Chet," I cautioned, "to make no move until I've seen him again. Tell Haidley I'll see him too. And what about Jane and Straith?"

"Neither knows yet," he explained.

Leaving the dependable Gordon to hold the impetuous LaVarre in check, I hastened away to Chris Maitland to whom we so often resorted in trouble.

I was glad to find he hadn't retired—though I should have awakened him in any case. He'd just returned from a hospital case and was smoking a goodnight cigarette. He knew at once that I was disturbed. Briefly I gave him the facts.

"So you see," I said in conclusion, "that LaVarre has built up a damnable web out of it, and it looks pretty black for John."

Chris was even more impressed than I'd expected, and in a moment I knew the answer.

"Bad indeed, Lander," he rentinded. "Have you forgotten where I first heard of N—o—n?"

I hadn't forgotten by any means that he had seen that name first on the back of a card where the word had been scribbled by Haidley. I'd thought of that back there talking to LaVarre and had feared any moment he might mention it.

"We can tell though, Lander," Chris said. "Your N—o—n is licked!"

"But Crowley Waite—" I began. Chris interrupted me and finished my statement out.

"—said it lost its identity in aspirin; it retained all its deadly power, but lost its identity."

"And LaVarre knows that," I explained. "I tried to tell him he couldn't prove it was there. But he's satisfied with his

circumstantial evidence—two deaths where powdered aspirin showed up."

"Yes," Chris answered thoughtfully. "And you were worried, Lander, all the time you bullied LaVarre, because of another fact: that while LaVarre couldn't prove it was there, by the very self-same token you couldn't prove that it wasn't."

"That's the hitch in it, Chris. If the thing ever got to court and a jury was inclined to accept the two deaths as logical acts for Haidley, we couldn't prove there wasn't poison."

"We can though," Chris asserted, "and God knows I hope there wasn't. I'm disturbed just the same that Haidley should have known about it, along with the other attendant facts."

He'd said "we can," he'd found a way, then! In my relief I could have embraced him. But now he was speaking again.

"The thing was a challenge, you know—when you repeated what Crowley Waite said—that it couldn't be spotted in aspirin. In a way, too, Waite was right. You can't spot the poison itself, yet you can tell if it has been there."

He saw plainly that I was puzzled, that the statement seemed contradictory.

"It modified the aspirin slightly," he added, "in a way that I've learned to check."

There were a thousand words of gratitude and admiration that I wanted to say to Chris—the fine old Chris with those amazing hands. But I held them in check for the present with this cloud on Haidley's head.

"Get Gordon on the phone," Chris ordered. "He'll have to wheedle samples out of LaVarre, both from Telfer's body and of that they found with Krausemeyer."

"Wait a minute, Chris," I said, a frightening thought dawning in me.

"You mean—suppose this N—o—n shows up when we make our tests?"

In truth that was what I was thinking. LaVarre, at the present time at least, couldn't prove its presence no matter how much he indicated it circumstantially. He had only deaths and aspirin. But suppose we made the tests now and proved the

matter for him that he couldn't prove for himself? Without us, LaVarre's case was circumstantial; with us it might prove to be certain.

I thought then of the soul of John Haidley, of the clear-eyed fearless way that he must have faced whatever he faced. He wouldn't wish us to hide anything for him, or to take a wrong step in his behalf.

"We'll have to go on," I said, and reached for Maitland's phone.

I turned to Chris again at the end of my talk with Gordon.

"Can you make your tests down there?" I inquired. "LaVarre refuses to send samples out, though he says you're welcome to come down."

For answer Chris went to his laboratory, reappearing a few moments later with some greenish liquid in a bottle.

"Okay, let's go!" he said.

CHAPTER XIX

More About N—o—n

● At Headquarters the fairly complete police chemical laboratory was made available to Maitland, and into that he disappeared with Gordon, LaVarre immediately on their heels.

What would they report, I wondered, when next they appeared through those doors? Would LaVarre's theory prove right; would N—o—n be discovered in his samples?

I wished most anxiously to be with them, to be there to read in Maitland's quiet face the signs I should have been able to see long before LaVarre. But I had to see Haidley now; and when we met at last in the special room that LaVarre has assigned, I noticed that which sent through me a surge of resentment and anger.

It seemed an unnecessary reflection on my honor, on that of Haidley too, that he'd posted an officer outside the door.

Haidley looked, if anything, less disturbed than when he'd walked to me in the club lounge, and I wondered what story he would have to tell me. As to Krausemeyer's death, he stated at once

in all seriousness that he knew nothing at all about it. He'd heard it first, he said, from LaVarre, when the latter placed him under arrest.

"I left him alive," Haidley said, and I hoped that Maitland's test tubes would bear him out in this.

"But what in the name of heaven took you to Krausemeyer's room?"

He smoked quietly a long time on that question. We were old friends, of course; he felt no need to answer at once. He spoke quietly after a while.

"You know of course, Lander, that I've been aware from the very first that this business would suck you in. It was the kind of a thing into whose center you could no more avoid peering than I could keep away from the Louvre if I happened to be nearby. I knew you were on some trail.

"I had a feeling," he went on after a moment, "that your path would lead to Dick. I can't explain that at all; it seems the height of unreasonableness, I know—seeing that Dick was with us all and only sat there playing. Yet somehow I felt he was concerned and that you would find the answer."

Something told me that this explained much of the strangeness I'd observed in Haidley's actions since the time of Telfer's death—his fine protective loyalty to Dick; it was that no doubt, his anxious fear for Dick, that had betrayed itself in the flicker of his eyes that first evening when I'd mentioned "the perfect crime."

This was why he'd been so ashen-faced at the funeral. It accounted for his anxiety, no doubt, when he'd talked to me there in the lounge after Consolidated interrupted.

There were some things it didn't explain, though; but I was content that he should take his time. He continued after a moment.

"It was all right whatever you should find; for you too I knew loved Dick. But when Krausemeyer appeared, it was different."

"What did you know of Krausemeyer?"

"I knew that he was a genius," Haidley

answered. "I knew that he was vain but magnificent too. And I knew he was implacable, that there was no mercy in him, no tolerance for what he might call crime."

In the silence while Haidley smoked, I came face to face at last with a consciousness I'd been fighting since that night, the consciousness that deep in my heart I too could not justify crime.

Calmly, I was thinking of Telfer and his career—how even there in the circle of those whom he should have respected, he was carrying on the mean business my recent correspondent had exposed, casting his evil eyes on Maria, too; calmly I say, I could see that only justice had been done. In spite of all that, I had to admit, though, that my Puritan orthodoxy told me more strongly still that justice is not Man's to take in hand.

Haidley must have sensed that I was absorbed, for until I shook off my thought and gave him my attention again, he said nothing more at all. Now he went on, however.

"So I was disturbed, you see, about Krausemeyer."

"I suppose," he added as an afterthought, "that you wonder why I was there in the dining room at the Ambassador. That wasn't premeditated, I assure you; it was purely accidental. I frequently dine at the Ambassador. I saw you too when I came in; but you looked at the moment as though you'd drawn a sword and were on guard. So I didn't attempt to distract you. I knew your opponent at once—one couldn't mistake that great head—and I guessed why you were on guard."

"Did you hear all we said?"

"Only along at the last when your Krausemeyer got to boasting. I paid no attention until then; but I couldn't escape that very well. He raised that soft voice a little then. He said, 'Krausemeyer goes on with such things.' The way he said it, Lander!—it sounded like forever and ever—and after all you'd told me about him, and all I know of his career! So I went up there to see him in his room."

"But why, John?"

"I hardly know myself, Lander. I was terribly disturbed, of course, at the prospect of him stalking Dick. And then I didn't like his gloating, the devilish conceit of the man. I felt that he couldn't know really anything so soon. I thought he was dramatizing himself into the thing with all that talk about Krausemeyer having the head. I thought a little cool talk might bring him back to earth."

There was a grain of reason in that.

"So you went up and you introduced yourself to Krausemeyer?"

"I tried to, Lander. But the insufferable airs of the man! I could have struck him except that he's almost a—"

In the breaking off of that sentence I knew that Haidley's kindness, the innate kindness of the gentleman, wouldn't let him say it readily; but I knew very well he meant "cripple."

"He interrupted your introduction?" I knew how this supercilious Krausemeyer could receive another if he chose.

"Insultingly, Lander! I hadn't said a dozen words—broke in on me without waiting at all. 'It's quite all right, young man; I know you very well. You have a very bad daub at the Metropolitan' and added with that cynical laugh of his, 'There must have been women on the jury.'"

I couldn't keep back a grin at this. It was Krausemeyer's offensive way all over. Haidley went on again.

"I didn't mind that, of course, about my painting. But he went on quite uninterestedly. 'What have you come for?' His voice so clearly implied that it couldn't be of any possible importance to one so great as Krausemeyer. Just 'what have you come for, young man?'"

"Well, you know, that was unbearable, Lander, and especially that 'young man.'"

"Go on," I said, seeing it all very vividly—enjoying it a little, too. "What did you tell him you'd come for?"

● Haidley hesitated a little then, but he saw that I was waiting for him to go on.

"It was clear, you see, Lander—no mat-

ter how acute he is mentally—that the man had no breeding at all, no common decency, in fact. After that I'm afraid there wasn't much with which I can credit my own manners either."

"And so you replied—?" I encouraged.

"That I'd come to take a little of the ego out of the most conceited ass I'd ever seen."

I could get the picture of that and I chuckled inwardly. It could have been very tense then, too. Not many had spoken so to Krausemeyer.

"What did he do then?" I asked eagerly. "Recall exactly now, and tell me carefully."

"He started as though he'd been struck. He jumped, jumped clean out of his chair. Then immediately he checked himself. It was as though he were fighting something."

"And then?"

"He got hold of himself. Only a flush was on his face—a peculiar angry dark red. And then very coolly and deliberately he proceeded to insult me again."

"Again?"

"Yes. It was deliberate stage-play—pure acting. He passed his hand languidly over his forehead as though he were immeasurably bored. 'Go away, young man,' he said. 'Krausemeyer has had a hard day. Run along and don't bother me now.'"

I knew how Krausemeyer could say that, how Haidley must have angered him, too.

There was something in Krausemeyer's humble origin that tremendously resented innate breeding. And I knew that whatever Haidley had said, or how badly he thought of it now, he had said it like a gentleman and it had cut Krausemeyer the worse for that.

Perfectly well I knew—who had worked with Krausemeyer often—that after all the elaborate boredom concealed in his 'run along young man,' was really a terrible rage.

"So he had no time for the young man?"

"And his manner, Lander—his airs! He took pains to be tremendously offensive!

I knew then that there was no use in trying to talk with him. But I couldn't resist a parting fling when my hand was still on the door.

"I have a story for you, Krausemeyer," I said.

"His flash of interest was very sudden. I think by the quiet way I said it, he thought I had something to confess, though he hid the look at once. 'Ah yes,' he said still affecting his elaborate boredom, 'one hopes it's interesting.'"

"The story is by Aesop," I said, and his face fell into that terrible scowl and a darker red than before. As I closed the door behind me, I told him with a malice I am now quite ashamed of. 'The fable about the bullfrog.' He tried to interrupt but I went on, 'the one who blew himself up.'

"I closed the door at that and didn't go back at all. And I really didn't think of him again until LaVarre told me the man was dead."

What had followed Haidley's exit was easy to understand.

Krausemeyer *had* had a bad day. He was already tired when Haidley had come. I knew that his concentration could be tremendous up there in that massive brooding brain; and I knew what that would mean too for the totally inadequate body.

He'd only just come from our interview, too, and I'd disconcerted him somewhat, dulled his flashing point a little. Then Haidley had annoyed him, first by being unimpressed with his greatness and frankly calling him an ass. Haidley's "conceited" had added to the flame, for indeed that was Krausemeyer's weakness.

Then Haidley'd flung that parting shot and left Krausemeyer impotent to answer, the door being closed on Haidley's going. It was too much, capping that story of Aesop's with which Krausemeyer would have been so familiar. Worse still this reference to the frog—the frog with the gangling legs!

So his anger had killed him at last as he'd feared it sometime would, killed him as effectively and quickly as his worst human enemy could have done.

And after all, I regretted his passing. We'd had many a joust, this clever devil and I, and I was sorry that he was gone.

"And the aspirin," I interrogated then, "that was found near Krausemeyer's body?"

"He'd bought it, I think, for some test in the matter he was threatening to solve."

The door opened then and Maitland was standing there. I'd almost forgotten as we'd talked—hearing the story of Krausemeyer—the tense errand on which Chris had been there with his mysterious green liquid in the quiet of the laboratory.

Was Haidley to walk free from this room, his story verified now by that which Chris would have found? Or was he to go back instead to the quiet of that grey corridor with its rows of iron barred doors?

"Let's have it, Chris," I challenged.

"Nothing there," he assured. "Even LaVarre is satisfied."

He was gone a moment later after a bit of chaffing with Haidley. He left the door open as he went and I could see that LaVarre's guard had been withdrawn.

Now that the shadow was lifted that had rested for a time on Haidley, there was still a matter or two that puzzled me not a little. I put a question to him now.

"Did you know," I inquired with interest, "that a smear of the geranium pink which you used in painting your sunrise was inside the cover of an aspirin box that stood on Telfer's dresser?"

"Yes, I knew that," he said. "That was my carelessness when I picked up the box from the dresser."

"When—also why?" I exclaimed.

"While you were in the kitchen with Dick, I had noticed the aspirin on Telfer's waistcoat, though you thought I didn't. I could see the other box sitting there on the dresser. Curiosity did the rest."

"And the other business," I continued, "the name of that poison on the back of the card you gave to Maitland?"

"Poison?"

His answer reminded me once more how readily the most careful of us—and

I prided myself on being careful—can overlook the simplest explanations.

"You forget," he said, "that N—o—n is not an original word except in its application to your poison. I'd looked it up in an aimless moment while at work on a cross-word puzzle."

How simple it was after all, and yet my mistake had been natural. The word had but one significance for me, while for him it had quite another.

Already the night was gone; the cries of newsboys alert in the early traffic were calling their noisy attention to another day's supply of events. I was glad to think quietly then that no screaming headlines would besmirch the Haidley name.

"I'm going for a stroll," I said, and added with a regret for the passing of Krausemeyer my own version of his fling at Haidley, "Sometime you should be a great painter; for the present keep on with your 'daubs.'"

CHAPTER XX

The "Administrator"

● As I dropped gratefully into my stride in the tang of the morning air, I was conscious of a lively curiosity about this unknown who was to meet me at ten. I suddenly found that I was hungry too. I walked for a half hour, though, and finally dropped in for my favorite table at Staley's.

Haidley was out of the reckoning; I was glad indeed for that—not only for Haidley's sake and the sake of the splendid Jane, but glad that at least a few of the troublesome threads were removed from the tangle. I'd forgotten to ask him, though, about that puzzling white splotch along his own pocket so like the one on Telfer.

The morning papers, and leisurely enjoyment of an omelet set off with the famous Staley coffee, beguiled an hour so swiftly I hardly realized it was gone. By the time I'd sauntered unhurriedly back to my rooms, it was nearly ten o'clock.

I put Telfer's book in my pocket prepared to meet my man.

My doorbell rang at exactly ten and a moment later Dinah showed him in. Somehow his punctuality didn't surprise me; I'd rather expected it of him. I'd risen at the bell and now surveyed "the Administrator" with interest at first, and then with disappointment.

He was the dark young-old half criminal type of slightly more than average height, without any outstanding features—unless it were possibly a certain mocking twinkle in his calculating black eyes. He surveyed the whole scene all alert for the least suspicious sign, and without seeming to do so he was taking in the whole room, I knew.

"I'd like those blinds down," he said curtly and stood there watchfully exactly where Dinah had left him, until I had lowered the shades. When these were down and I'd snapped on the lights, he looked at me a moment keenly—for the first time, I realized—as though trying to read my face, to judge if I were really to be trusted.

"The dame give you a good rep," he said at last, "and I know somethin' about faces myself. How about askin' me to park?"

"Do! Make yourself comfortable," I invited.

For the first time then, he took his hands from the side pockets of the smart topcoat he was wearing, and I felt quite certain that up till then each hand under cover of those pockets had coolly grasped a hidden gun. He sat down as I had suggested and I noticed now that he was bare-headed.

I decided after a moment's survey that there was little unusual about him, except possibly a sense of humor which he'd betrayed in his letter to me. His type I'd seen hundreds of times about the lobbies of the half-world hotels, or lounging in second-rate night clubs. The bare head and slicked-back hair completed the picture thoroughly. He was none of the fop, however, and there was plenty of courage in his jaw.

His speech had surprised me a little after the smooth flow of his letter, which had suggested some education. I decided after a moment that this was a common phenomenon, however. His language was the jargon of his daily life, while his written word unconsciously went back no doubt to earlier and perhaps better backgrounds.

I offered a cigarette.

"Will you smoke, Mr.—"

"Never mind the name," he answered coolly and added, "Yes, thanks, I'll smoke—one o' my own, though, if you don't mind."

He was being wary, no doubt. And yet when he produced his cigarettes, I saw that they were specially made and much more costly than my own.

"Will you have one of mine?" he offered.

"No thanks," I challenged. "I shouldn't be less careful than you."

"Fair enough," he countered. "And now let's get down to business. You have the book, I understand."

I nodded my confirmation.

"How do I know?" he inquired meaningly.

"Would you recognize a description of it?"

"Just like my own child."

I proceeded to describe it minutely as to color, size, and as much as I could of the coded contents.

"That's the little Bible," he confirmed. "Now I suppose you'd like to hear about the skirt. I got her at the school after using a good ringer for Mr. Straith's voice, telling the lady principal he was sending a car. So she's havin' an outin' in the country now, and while she's not eatin' so good, and kinda lonesome, I guess, she hasn't come to no harm. I can deliver her in half an hour any time I like."

"Of course, you understand," I cautioned, "that while I've given you my word for the present, if you fail me in any way I'll follow you to the end of my days."

"Listen, Mr. Lander," he rejoined, "I ain't above drivin' a barg'in by a little kidnappin' if I have to, and now that I've gone that far, I wouldn't stop at worse. But I took your word and came here in daylight alone, and you've got my mug photographed in your mind. So you ought to know I'm dealin' square."

"That's more than your partner did," I said, thinking of Telfer and his experienced and underhanded planning to profit by Maria's innocence, while living under her brother's roof.

"Oh, him," my visitor snorted. "He never was much on that. Especially if there was janes around. But he knew a lot of swell folks and we got real money for our stuff. That was his job and he done it. Mine was to get it to him. We didn't deal with no riff-raff, Mr. Lander—no passin' it out on the run to bums in dark alleys."

He was, with that queer oddity of his type, quite swelled with the pride of his clientele, and I thought it well to let him boast.

"You'd be surprised," he said, "at some of the names in that book. Pretty high up—some there. That's why I got to have it; there's plenty more dough there. I guess there's something I ought to say," he continued, a different tone in his voice, "because I see you don't like this business."

I suppose he'd caught the distaste in my eyes for his rather boasting talk.

"We never made no dopers," he added after a moment. "We just fed 'em. We just had a medical stand-in where we got the names of them that were already users and that could afford to pay well for it. There wasn't no harm in that; they were all smart people, Mister."

● I remembered again as he talked how

Jane had said of Dick, mentioning that night he'd emerged running from the lab that his eyes seemed to burn. I remembered suddenly the name of that garish place beyond the corner around which Dick had gone—the All Night Drug Emporium.

"By the way," I broke in on his boasting, "do you know Mr. Straith?"

"You mean the brainy guy where Mat hung out?"

"Well, yes. You could put it that way."

"Never knew him," he said, "only to see. I think they were friends a long time. I suppose it's all in the log."

"The log?"

"Yeah. Mat's story of his life. It never interested me."

"I don't understand," I confessed. "Was he writing the story of his life?"

"Not exactly, I suppose. But he musta kept a pretty good record; he was always writing in it."

"In the log as you call it?"

"Yeah. He had another room, you know, kept it after he went to Straith's place. It was at the other room I always met him. He was there most always till afternoon. And he was always writin' in it. Say," he broke off at last, "what do you care about it?"

"I'd like very much to know," I explained, "his connection with Mr Straith."

"Search me, Mr. Ashton-Wolfe," he said grinning. "I don't care nothin' about his private life. I only want that list."

"Thanks for the compliment," I said in return for his "Ashton-Wolfe," "and how shall we make our exchange?"

He made a little almost noiseless movement at that, and I was surprised to find myself suddenly under the menacing muzzle of one of his guns.

"Why the armament?" I inquired, careful however to make no offensive move.

"I am about to divulge," he said evenly, "the signal which would release the skirt. And I don't propose givin' it till I am satisfied, nor your givin' it ahead of me either. The signal will be the raising of those shades, but I don't want it done 'preemachurely.'"

"All right," I said, "what precedes the giving of the signal?"

"The giving of the book," he drawled.

"Isn't that asking quite—?"

"It ain't askin' nothing," he interrupted. "You got the goods on me now, and I'm stayin' here till she arrives. You

couldn't ask no more. You simply hand me the book and then I raise the shades. When I do that, my buddy who is sittin' outside in a car will flash the word to where she is and she'll be on her way in five minutes. I stay here till we see her comin' and I leave you before she leaves the street."

I gave him the book at that, still under the muzzle of his gun. Still keeping me covered, he leafed it through a little with his left hand, shoved it at last into his pocket and put away his "gat." He then raised the shades and sat down again as before.

"Inside of five minutes, as I told you," he informed me quietly then, "the dame'll be on her way. When we see her from this window," and he pointed to the one facing the street, "get out of the taxicab, I leave, and you forget you ever saw me."

I hadn't much misgiving in the matter. It was pretty clear that the book was his whole intent and that he was satisfied now that he had it.

Maria's return was accomplished exactly as he'd said it would be. She stepped from the cab, in manner more unconcerned than I could have imagined; and looking at her presently seated opposite me, a little pale perhaps, it seemed it might all have been a dream.

I suggested she call Jane at once, then the Dean of her school. And while she was engaged in this matter, my mind went back again into all the strange shadows of this thing—how Dick had sat there playing that strange palpitating music—how Telfer had lunged, slumped back, and died when Dick finally got to the Brahm's that Gordon said positively he never played except when Telfer was in the room. There was that puff of white, gone before scarcely seen—the strange quick fleeting odor, the way Dick ceased so casually coming to his perfect cadence—the paper he'd crumpled at the piano with its note of overtones and its other cabalistic figures—the aspirin powder that rayed out from Telfer's pocket and up his waistcoat front, and the tin box in the pocket, cover flattened clean back.

The list lengthened, but I reviewed it, for Krausemeyer had said "the Straith case;" and with Haidley out of the picture, N—o—n was disposed of as well; Peg Duncan and Crowley Waite with the sinister fingers that pointed in their direction were also now absolved.

The shadow, if indeed there were one, rested only now on Dick.

I recalled then those craters in Telfer's skin, Maitland's gruesome statement that "the man was a wreck inside—his arteries full of little holes—," more powdered aspirin on the dresser, this box open likewise, Gordon's talk of dissonances and Straith's unwonted transposing, to which at all other times he was so opposed—his disappearance from the kitchen, later his odd pilgrimage to his laboratory and that incident there at the Ming vase—the strange fact that it was the same music Jane heard in the laboratory that night that he played later when Telfer died. And how could she hear a piano in the laboratory when there was no piano there? What had Dick meant, too, when I talked to him that day he'd been reading his Kipling story, by repeating almost verbatim the statement I had made when I said: "I didn't know—yet?"

- There was too that business of Maria fainting, and that odor I'd caught again down there close to her. I remembered suddenly, too, the splotch on Haidley's waistcoat—so much like that on Telfer's—which in our recent interview I had forgotten to ask him about. And there was the matter of the insurance.

Jane Haidley was on the way to take Maria home with her, but before she left me, I wanted to discuss with her that very puzzling matter of Telfer's insuring for Dick so soon before his strange death. It seemed possible now (since from the Dean I knew that Maria had been more friendly with Telfer than we'd thought) that she might shed some light on that.

First, though, she had to know the reason for her strange experience of the last two days; and though I was reserving for another time my hearing of Maria's own

story, I had to tell her briefly about Telfer and his partnership. She was surprised indeed to hear that, and that Telfer was not all he'd seemed.

I got back finally then to the matter of the insurance and was scarcely surprised, after all, to find that Maria knew.

"But why Maria?" I exclaimed. "He wasn't friendly to Dick."

"I don't see how you can say that," she remonstrated. "He was positively fond of Dick, and I thought what he did very grand."

She thought what he did very grand!

Something in the light in her eyes, in the way she made that statement, shed a sudden illumination on the whole fantastic proceeding of Telfer who'd sat there almost cringing before Dick, having made this generous gesture.

That was what it was—a gesture!—and done with his usual cunning. It was a showy play for the grandstand, that in this case was the fascinated Maria so prenable through her worship of Dick. A moment later she added weight to that thought.

"You didn't like Mr. Telfer, did you?"

I admitted that I didn't.

"At first," she went on reminiscently, "I really didn't myself. I liked him first I think when he said how he admired Dick."

That was the moment, I mentally told myself, when he'd sensed the road to her heart—her inordinate love for her brother.

"After that," she said, almost voicing my thought, "he often talked of Dick. He spoke of how good Dick was to have him there. He must do something to repay that, he said. He thought he should give Dick some money; but I warned him about Dick's pride."

"Then one day he came to the school for me very excited. He showed me that paper—the policy, he called it. And it seemed such a great amount. He said Dick couldn't be hurt over that and added, 'because when he gets it, I'll be gone.' He said that might be anytime soon."

"What did he mean by that?" I inquired, feeling I knew already.

"He lived in the world," he said, "and that this being here with us was only a pause for him. He'd be going on soon," he said, "and then anything might happen."

It was devilishly clever, I thought, in its sureness to impress her imagination. A magic formula indeed, this building of a mystic romance about himself and hinting a D'Artagnan life—all under the cover, too, of proclaiming an undying love for the brother that Maria worshipped.

He wasn't well situated to give gifts to her openly, as he would liked to have done. And these, even though he could have given them, wouldn't have woven half the glamour around him as this gift that could only come through his death. And when you considered all that, and the money he would gladly have spent otherwise to make an impression on Maria, he would even balance financially. The insurance he could stop any time when it no longer served its purpose, or had served its purpose well enough. Besides, it pleased his vanity tremendously, this pretended fifty thousand beneficence that he never intended to bestow.

As to my own belief of Telfer's reasons for the insurance, I decided to tell her nothing.

I was thinking now of something else, that matter of her fainting that night. It hadn't seemed natural at the time—and that phantom odor was there too.

"Were you greatly shocked," I asked, "when Mr. Telfer died?"

"Of course," she recalled quietly. "I had never seen death before—not even the quiet kind."

"And was that why you fainted, Maria?"

"N-o-o," she said judicially. "It didn't affect me that way. I felt awed and quiet as though I'd looked into another world. I wasn't faint though; but I *had* been a little sick before that."

"Before?"

"Yes; for some little time before, a kind of throbbing in me. It was while Dick was playing the piano."

"How do you account for it?" I inquired.

"I don't know, Mr. Lander. Earlier I'd been walking with John. We'd succeeded in tramping off a light headache I'd had in the afternoon. At least, I said the walking cured it, because it went away before we came back. John said it was the aspirin."

"Aspirin!" I ejaculated. She answered my look of surprise.

"He got some for me at a drug store. I took only one tablet, however, and he put the others in his pocket."

That splotch on Haidley's waistcoat that I'd forgotten to inquire into. He must have changed the package to his evening clothes in case Maria should need another.

Jane Haidley coming in at the moment cut off any further inquiry, taking Maria to her arms. She scolded me, too, when she found I'd done nothing but ply her with questions. But she gave me a friendly smile as they went away to her car.

CHAPTER XXI

Telfer's Notes

● With Maria safe in Jane's care, I was free to put my mind at last to the task of linking up the threads of that idea that had steadily refused to down from that first moment when Telfer died.

I had arrayed one by one the pieces of the puzzle a half hour since, while Maria had phoned her friends. There was concentrated work still ahead in fitting them into their places.

But what with the contradictions and confusions cleared away that had clustered thickly about Haidley, about Peg Duncan and Crowley Waite too, and what with Dickie's crumpled paper, Biglio's interesting conjectures, and that talk I'd had with Gordon in the club lounge that afternoon, the obscurity was clearing away and I was seeing with definite clarity at last.

It was already early afternoon, and I gave myself over for the first time in the past three days to quiet, lucid thought. And presently I knew what I knew. And though it cast a cloud that tinged my thoughts of Dick, I let it rest at that.

The first mental quiet in days was settling about me gradually, when my doorbell brought me back to it all, and Dinah presently entered with a package in her hand.

"A man left it," she explained, "and drove off."

I recognized the handwriting at once as that of my late visitor, the self-styled "administrator." I opened it up at once. A sheaf of closely written leaves it proved to be, taken, I could see at once, from a three ring loose-leaf cover. On top lay another sheet of paper on which the ink was scarcely dry, and again in my visitor's script contained this brief explanation:

"You expressed considerable interest in T—'s connection with your Mr. S—. I have taken some leaves from the log—I have to destroy it anyway—that may settle your curiosity. Long life to you and lots of excitement. If I wasn't in the big game I'm in, I'd like to be a dick like you. Good-bye, and be sure you draw first in the pinches."

It was signed in quite the way I'd expected with his humorous quotes on the "administrator."

So these were pages from "the log." He'd said they would appease my curiosity. Here I was to know at last then the answer to at least one question, Dick's bringing of Telfer to that studio—the answer too, perhaps, to much that had followed that.

And though I was satisfied that I had found my way without these, I wasn't reluctant at all to know the answer to all that. So with a mental "thank you" to the "administrator," whom doubtless I would never see again, I yielded to Dinah's persuasions to dinner; afterward under the glow of the lights, I settled down comfortably with my pipe to a perusal of the pages he'd sent.

In the end, I folded them up. It was nearing eight o'clock. I was going to Dick at last.

I walked the way to Dick's place for the further ordering of my thoughts. I was scarcely surprised when I arrived to

find that Gordon was there, with Maitland and Haidley as well.

Instantly I knew how it was. Dickie had sensed in some way that these others too were disturbed. For them as well as for me, the pall of this shadow must be lifted. We'd grown very close, we five, as the years had gone their way.

Bob Duncan wasn't there, and it was no reflection on his standing, merely—I sensed in my mind—a recognition of the fact that Duncan was far too practical to have grasped the thing I believed was to come.

The tang of an October night that definitely promised frost made Dickie's fireplace doubly cheerful. The big studio was softly lighted. In the shadow sat the great ebony grand from whose vibrating strings had come that weird encompassing music. Dick and the others, when I came in, were grouped lazily near the hearth.

In all the group there wasn't one but felt by now that Dick in some strange way had put an end to Telfer. They may not have gotten to the point where they'd have admitted the thought concretely. Maitland had felt it, though.

Haidley too had been alert to ward off Krausemeyer. Gordon had gone no farther than that statement about Telfer's death, that "Dick was not surprised."

So the shadow was there on all and Dick of course had known with the delicate intuition he has. Though no one would have dreamed of asking Straith to defend himself, I thought that he had done well to bring them together now.

"We've just been talking," he said after he'd put away my things and we'd joined the rest of the group, "of your eternal pursuit of the inscrutable. You see what it's led to at last?"

"An excellent fireplace," I interposed, "and a group of pleasant friends."

"And to the unhappy necessity," he added, "of doing an unpleasant duty."

I scrutinized the others then: Gordon intent and excited, good old Chris stretched out into more length in this hour of relaxation than I'd seen in many a day, Haidley watchful, at hand to support old

Dick. I looked at each of them to see if they were parties to his banter, to see if it had been rehearsed for my benefit.

It was entirely Dickie's, though; the other faces showed that.

"An unpleasant duty?" I repeated, questioning.

"Yes. An unpleasant duty," Dick echoed. "Haven't you come to get your man?"

● Dick had kept me a chair opposite the center of the hearth. Straith and Gordon were at its two ends, Straith on my left with Haidley between him and me, and Gordon on the right with Maitland there between us.

"That's what one gets," I laughed, "for being known as a 'dick' among friends to whom he poses as a criminologist. However," I added more soberly, "I really came to hear a story."

"You're the Elephant's Child I think now," he conjectured. "Come to ask me questions."

"No. Just to hear a story."

"The story of—" and he waited.

"The Brahms' Waltz," I said.

His face was a mask at that, his answer no clue to his thought.

"Always the poet," he said.

"There are less poetic titles, if you like."

"I like second titles, Lander. 'The Story of The House on the Moor, or the Ghost of Faulkner Manse.' By all means a second title."

"Well, then 'The Mystery of the Disintegrated Aspirin.'"

He responded to that, I thought, with a look that was commendation, though it might have been interest, or surprise. It was gone before I could quite decide.

"The Mystery of the Disintegrated Aspirin." Better and better, old friend. You see, gentlemen," he said turning to the others, "I like to spar with Lander. Whenever he has something up his sleeve, I like to make him show it.

"You know, of course," he continued banteringly, "that he has a reputation in these matters away beyond what he de-

serves. Just between friends, I ought to tell you that I think he's really only an excellent imposter."

There were appreciative chuckles at this and I took it in that friendly spirit.

"He has an air of looking as though he knew all about it," Dick gossiped, "that in times past has been the undoing as we all know, of some very clever criminals. They take one look at that poker face and immediately break down and tell all."

I didn't mind all this, and it had its place, too, I thought. I didn't know what Dick had told the others, so for me this touch of banter was taking away a bit of the strain. He eased the situation further for me by the next thing he said.

"Be as severe as you like with me, old friend. They're all expecting it of you, though old Chris there is trying to look unconcerned and Gordon is exhibiting all the blaseness that an old time newspaper man should."

"I'm afraid I don't understand," I pretended. "I thought I had come for a story. Just what is the situation, and what is it these good friends expect that I am supposed to supply?"

It was just as well, I thought now, that Dick should make that clear. He did it very seriously too.

"The ever fastidious Lander! Though the situation is probably well understood by every person present, he wishes it stated for the records. Permit me to state it, then."

He took a moment to frame his words and finally went on quite seriously.

"On a little group of friends a sinister shadow falls. And out of that shadow reaches a finger pointing to one of the group. The time has come at last to banish that shadow or—face it."

Exactly like Dick, that was—so simple, direct, and unflinching.

"The rest of you here have felt it," he said, "—that shadow. And while you have been doing that, Lander has been going up to it. He's been touching it, peering behind its robes. He thinks he knows now what lies back there.

"I shouldn't be surprised if he does.

But as I told you a while back, I like to spar with him, and I shan't let him bluff you all with that mask-like Chinese face."

Gordon was enjoying this immensely. He used to battle me much the same way. Even Chris and Haidley had appreciative grins for Dick.

"So what do you know, sir?" Dick asked.

The smiles went away at that, and a new tenseness came back into the group. This little circle around Dick's hearth became almost a jury then.

And now, how should I begin the thing? Would I prove to be wrong after all? Should I make butt of myself?

"I know," I said "that aspirin comes in tablets and that it does not disintegrate by magic."

"Elementary, Mr. Criminologist," Dick interjected; "go on!"

"I know," I continued, disregarding his banter, "that it cannot force open the snap covers of flat tin boxes nor toss itself about on people's waistcoats, nor scatter itself over the tops of dressers."

That was striking pretty close to the heart of things, and I hardly think he expected that so soon. He took it coolly, however.

"I warned you," he said with a smile to the others, "the man is devilishly clever. Aspirin comes in tablets, mark you! It doesn't disintegrate by magic. It cannot open boxes nor climb up people's waistcoats. Didn't I tell you, my friends, he's profound?"

We were used to this kind of raillery. We'd all been the butts of it by turn—Dick no less than any other.

For once, though, I thought that the others now were a little slow to respond. The old spirit of ragging was not there. I gave them time, then went on.

"I have a nose for odd odors too. May I add, at the risk of another sally, that I think a new one has recently come into existence?"

"Good old Lander," he said.

And then, as though to make amends for any fun he'd been having, he spoke to the others quite seriously.

"I told you he'd gone up to this shadow, touched its robes and looked through its pockets. I'm very much persuaded, my friends, the villain knows his way. There's just one other question," he said, turning to me. And now he was serious at last. "Can you justify your unstated theory with an actuating cause? A motive, my excellent friend?"

I thought of that ten-year-old story that Telfer's pages had revealed.

"I can't take much credit for that," I said, "and I could have been perfectly satisfied without it. It was a gift from the gods, however."

"But you have it, Lander?" he asked seriously.

I nodded, and he knew I knew.

Quietly he scrutinized me a moment, before he spoke again.

"The motive then, my friend?"

"I have some excerpts here," I said, "from a sort of log which Telfer kept." I held them towards him and he took them into his hands. There was silence while he read them, and at last he handed them back.

● He was silent a long time after that, and I knew what his thoughts would be. That story there; there was no reason—he could see that at last—why it shouldn't be shared with us now, now in the presence of this shadow. He wouldn't have done it otherwise. Ten years of silent sorrow proved that. But he owed it now to these friends.

"Read it to the others," he said at last.

You couldn't have called it a diary. But such a thing as Telfer had written, I could easily imagine him doing. A braggart with few friends to boast to, he had done his boasting here. Here, the cheap treasure he had filched from life, he had hoarded away to gloat on again in strutting self-satisfied moments—a miser with tarnished gold.

It was a soiled mirror I'd found, held up to his own servile flattery—a thing in which he could look at himself in past glories and preen himself anew.

Only at the last it took on another note, and he had screamed to it like the coward he was, as he had boasted to it before.

Here was the first entry that I read, dated ten years before, in July 1922:

"Met Straith's girl. He introduced us. Calls her Joan.

"She certainly is a beauty."

It was simple enough, that entry, with no hint of impending doom.

Other entries in the same year followed, sometimes three times a week, sometimes not so often.

Finally I read this aloud under a date at the last of August:

"Met Joan today on the boulevard. He wasn't along. She was going to meet him, though, so I only chatted a moment. There sure is something about her. High strung. She'd like a strong hand, though, I think, and Straith is the gentle kind."

During the last of September his entries—I merely stated to the group—showed him to have been in Florida. There was mention of Joan even there. He was back in town in December, I explained, and read aloud the following entry:

"Dec. 5th. Danced with Joan tonight. It's up to Straith from here on. He's half dazed with research. Studying Joan would be more to the point."

Even so early in Telfer's log as that, my listeners could sense, I knew, the self-fish drift of his mind—the meanness of him too. I skipped several uninterestingly conceited entries, names of other women, and finally read this from January:

"She sees the point all right, that if Dick really loved her, he wouldn't put his laboratory first. For awhile, how she denied that, though!"

Again I skipped other entries that were merely boastful things, reading to them only enough to show how Telfer had used Dick's great scientific absorption as proof to her that Dick didn't care. Every man in the group could, I think, see how reasonable it was for the girl Joan to have believed it, knowing as each of them did Dick's long spells of concentration.

I recalled to myself, too, at the moment, that this would have been the very time when Dick was visioning excitedly the hypothesis about which Gordon had told me. From the date of February 22nd, I read another entry aloud:

"Washington's Birthday. After the Country Club dance. Dick walked into us tonight."

I hesitated over the following paragraph but finally read it.

"Took it like a researcher would, the damned cold-blooded fool. I could kill him the way he looked. Why didn't he fight or something, instead of just standing there looking. And that music that came out to us there in the conservatory, some damn waltz he was to dance with her. Instead, he walked away. Well, Straith, had I been in your place and you in mine, I'd have smashed you and maybe her too, just for luck. Anyway, I've had her in my arms, though it's taken a long while to do it. I wonder now if it will be worth it? Only Joan can answer that. I'm betting that it will."

There was more of this kind of thing, I knew, from my previous reading of it at home. It was rather sickening, however, and already this little group, I felt, had learned enough of the past. They knew now what that sorrow was they saw sometimes in Dickie's eyes.

There wasn't much more at any rate about Joan, and knowing Telfer, they were perhaps, I think, thankful for that. They knew she would cease to be mentioned after a while, as actually was the case. I merely stated therefore, that Telfer was in Europe in '25 and in South America in '27.

I traced down hurriedly then, and the next entry I read was in the present year, a matter of six months back:

"Bumped into Straith tonight. All of ten years I guess. He was strangely unconcerned. I hadn't thought he would speak."

● From an early May entry I read:

"Straith having dinner at the Royal. Motioned me to sit with him. I was in-

terested to know what he would say. Never mentioned the past. He doesn't seem to be sore. We had quite a chat in the end. I did most of the talking. I told him the town was dull. It is. Old cronies gone stale or got married. He surprised me a minute later—said I'd be welcome to bring my luggage where he and a friend are living. Queer duck. But I suppose he's still 'researching.' I think I'll take his offer at that. I've been watched some lately, I think. Good place to lay low for awhile. They wouldn't look for me there in that swell kind of crowd."

After moving to Straith's place, he'd written in cynical vein:

"May 6th. Okay here. He introduced me to the bunch. [The next sentence got a smile.] Haidley is a real artist, I guess, but I don't like his trees. [There was reference here to Jane Haidley which I did not read aloud. Telfer had said she did not come often enough to suit him. There was reference to Peg Duncan, too, which I also thought well to omit. I decided to read the rest, however, as it had bearing on the matter.] They say Dick has a sister too. The newspaper chap is okay, and there is a Doc. Maitland who comes a lot. [The next paragraph, I knew, would be appreciated by the group, so I read it.] There's also a kind of detective chap. That jarred me a little at first, but I guess he isn't detecting any more. I don't think they took to me much but what the h—— of that."

"May 9th. Queer thing Straith did last night, played that same waltz at the piano like that one ten years ago when he came to dance with her. Startled me first a bit. He didn't look like he remembered, though."

Haidley had told Gordon, I remembered, that Straith played it the first night Telfer was there. The latter hadn't at once noticed, I concluded, which accounted for his not mentioning it earlier. There was a good deal of extraneous matter which I skipped and came to the following entry:

"June 10th. Straith's sister is swell. Young. There's nothing like that. I think

he thought I looked at her too much; but she didn't seem to care."

He had written no more till the 28th of June—unless, as I thought might be the case, the "administrator" had taken out the sheets. On that date, however, he had written:

"Damn it all, he plays that blasted waltz every evening that I'm around, and I keep thinking how Joan went out. The 'Brams' I hear them call it; and I'm not sure at all lately that this dizzy researching fool isn't the very devil himself."

In the minds of the little group around the fire was beginning to appear, I think, the outline of Dick's intent. I read from July 14th:

"I don't feel comfortable here any more, but I'm damned if I'll go just now with Maria taking notice. I've talked to her lately sometimes when the others got too highbrow. If you like Dick, she likes you."

It was some time in August he wrote:

"When he started to play tonight, I went out. For once I couldn't stand it. Wish old Brams [he was still misspelling the composer] had choked to death before he wrote it."

For some time he made no entries. This was not unusual, though. On September 25th he wrote:

"He's up to something hellish. I wonder what tells me that? I feel sure. Something I can't even guess at—or fight. Had word from P—that the other crowd are looking for me too. So I stay, and to h— with the Brams."

Entries from here on showed him torn between fear of leaving the studio, desire to stay, and hints at progress with Maria—all interspersed with ravings about Dick and the way Dick looked at him, and curses on the hated "Brams."

Under September 29th, I found these notes: "50,000 term. 50 bucks a month. I've spent more on flowers." This was clear to me now. It was the time when he had conceived that fantastic business of the insurance, which he thought would so impress Maria. "Term," as each of the group knew, meant that he had purchased

the least expensive insurance possible, and it was true as any of them could see, that a "sport" such as Telfer thought himself would have gladly spent more than this for the regard of a girl much less attractive than Maria.

There was one more entry in the book. It was made on October 17th, the last he'd ever written:

"There's a damn queer look about Straith—he's had it for some time back. Of course he played that tonight. Good God, don't I name it any more? Am I nuts, or scared? I'll name the damn thing—he played the Brams. Let him play it and be damned. That is a queer look though. By God, I wonder if I *am* an old woman—but I swear he looks as though he had something—some power. Too much imagination. She thinks I'm okay; the hell with Straith. I can take care of myself."

He was frightened and boasting there, trying to beat back his terror. But there was no more to Telfer's diary, for the next night he was dead. I thought of the young and impressionable Maria, of other Marias and other Joans too, and I felt it was just as well.

● During the reading of all of these excerpts, I could see in the eyes of all of them the ghosts of their own reactions. In Gordon you could see straining anger, the kind that would have physically torn Telfer apart—a great disdain in Haidley, that man could deal so with friend—and in Chris the sombre gleaming of those slow fires that could wake him to an angry giant.

Dick, as I had read aloud, showed not so much surface response; the memories had been too long with him for that, and he was too used to driving them inwards. When I'd finished, there was silence for a while.

Gordon tapped a cigarette nervously while Maitland contemplated thoughtfully the glowing end of his cigar.

It was Haidley who broke the silence. "It seems to me," he said, "in view of what Lander's just read, that there's real-

ly nothing more to be said." The others nodded approval.

"Thank you, John, and all of you," Dick said, a grateful warmth in his voice. "All the more reason, though, my friends, since you insist on being loyal. Don't you agree with me, Lander?"

Straith had been touched, I knew, by that faithfulness of these friends which sought no further defense. But he felt more bound by that reason to leave nothing hidden here. I agreed with him silently.

"Besides," he added more lightly, "I insist on further examination of our tricky Lander here." That, of course, was his way of relieving the situation. He turned to me again.

"What else have you now up your sleeve?"

"I think very highly," I answered, "of an hypothesis you evolved some ten years ago, that in the electrons and protons of solids there are rhythmic vibration rates—very high ones probably, that could be disrupted by interfering vibrations."

"The unforgetting Gordon," he commented.

Chet had started slightly at my mention of the old hypothesis. He hadn't judged, I knew, that it was of any importance here.

"You know then," Dick interposed, "that I was balked ten years ago for a way to create my interfering vibrations that were to be tossed into matter's rhythmic dance, to unbalance its steady step?"

"Yes," I said. "I knew that you were balked by that at one time. But that, I concluded, was before you got to thinking of overtones."

His mind went back I think to the moment when he'd crumpled that paper and dropped it there by the piano.

"And what," he inquired at last, "did you discover as to overtones?"

"Well, it was clear enough," I asserted, "that any original vibration started by striking a note—whether Middle C vibrating 264.2 per second, or any other, for that matter—would continue to double

in vibration and reach tremendously high cycles."

"What did you conclude from that?"

"That there was probably no limit to the high vibrations that might be obtained in this way."

"Biglio," he commented briefly. "And from that of course you deduced—?"

"That these overtones going out indefinitely into space beyond the range and limits of hearing must build up into vibrations of even millions per second."

He was eyeing me intently now. "And then?" he inquired at last.

"That they could be used," I said finally, "for the high vibrations you needed to unbalance the electron-proton dance."

I had stated my ground at last. The others of course would hardly have followed the thin thread of the trail we had come. To Dick, though, if I were right, my method of deduction was clear, and I wondered at last what he would say.

After all, would I prove to be wrong? Was he only leading me on?

For so long he sat there quietly, that even the others wondered. Gordon had grown noticeably excited as the connection of the old hypothesis dawned—the one he'd related to me yesterday afternoon at the club.

Maitland was excited too; for with that logical mind of his, his knowledge of science too, he could sense the possibilities of the thing. To Haidley, with his mind for art, the direction may have been less clear.

But finally, after what seemed a long time, Dick rose and went into his own room. When he returned in a moment or two, he had a sheaf of papers in his hand which he quietly placed in my lap.

On top of the handful of sheets which suggested a thesis of some sort, lay an oblong piece of green paper. Involuntarily I turned it over and scanned its typed and printed face. "Richard Straith, the Sum of Exactly Fifty Thousand Dollars," it read, and below was a sprawling signature under the printed name of Consolidated.

The fifty-thousand dollar beneficence that Telfer had never intended to bestow—I turned it over again. Already Dick had endorsed the back.

"Pay to the order," he'd written, and there was appended the name of a home for friendless girls.

It was a splendid deed, I thought. There was a touch of irony in it too—this weird trick of Telfer's reverting in the end to the benefit of those he'd most wronged.

CHAPTER XXII

Death by Science

● I started to hand back the papers.

"Keep them, Lander," he said. "Keep them in your hands, old friend. And now," he said addressing not me alone, but all the group, at last, "and now I should tell you, I suppose, the story at which Lander here has already so cleverly hinted."

It was this for which we were gathered. The moment was here at last and in every person present there was a tenseness that was almost electric.

"That night ten years ago," Straith began, "when I came to claim that waltz and found the girl I loved in Telfer's arms, I blamed only myself for it all. It was more than likely, I felt, that I had been too involved in my researches, that I had been neglecting Joan—though God knows I hadn't meant to.

"I loved her." He said that simply. It was like a benediction. It was as though it were his final goodbye.

"I didn't hate Telfer then—not even with her there in his arms. I supposed he'd won her fairly. Hate came only years later when I found her deserted and—dying, and heard how he'd tricked her in to it. He hadn't even wanted her—and God knows how I had."

Straith's face was a study in sadness. One could see how he was reliving the anguish of those moments again. What pictures he was seeing, too close to his heart to speak of, we listening could only imagine.

"I hated him then, of course.

"But she didn't know where he was—no idea where I might find him. So she died as soon almost as I'd found her. And I buried her in a little grave and buried myself in endless work. You know how ten years have gone, and there came gradually a kind of peace.

"Then Telfer showed up again, his very vigor and well-being an insult to the memory of her there dying, and now only dust in the earth. All the old hate blazed up in me, only worse perhaps for each of the ten dead years.

"I didn't let him see it, though. I held it in the most rigid check. Naturally my fists ached for action, but that would have been nothing at all. The thing was to make him suffer, to suffer long, as she had suffered—as I had too, whenever memory, as it so often would, went back to that night that I'd come to claim her there when the Brahms' Waltz was being played.

"The Brahms' Waltz—a thought came to me with that. I pretended to have forgotten, brought him to live at the studio. And here I played it to him.

"I couldn't see that it bothered him at first; but in time, I knew it would. I had only to keep it up—to keep it up, but to keep silent, too.

"After awhile the idea dawned in him that I was reminding him of that night, of the night I came to dance that with her, and of all that followed that. He realized after a time, too, that I knew about Joan's end. And because I never spoke of it, because I had brought him there with never a word, he became abnormally fearful about it all, exactly as I'd known he would.

"Had I blamed him, accused, or discussed—but this silence! And yet the continual reminding! The thing became hell to him at last—the wonder about my ultimate intention. That was the torture of it, I know. I read it often in his eyes, and it was there, you see, in the book."

The fire in the grate had burned low, and our part of the room was in shadow. One could see Dick's face half-lighted. Out of the shadow glowed Gordon's ciga-

rette, but Maitland was not smoking now. Haidley's face was a study in bronze.

"That was the punishment I planned," Straith went on at last. "Every day I expected him to break, to leave and never come back. I don't know why he didn't, but I got the idea he daren't—that he was hiding here with us. And now, it seems, he was. I didn't care about that. It only intensified his punishment—punishment and he living to take it; that was all I desired for Telfer.

"But afterward came another thought.

"It was after I saw, once or twice, the way he was looking at Maria—little imaginative Maria at the age to worship devils. Up to then I only planned to make him suffer. I thought now of something else; being the master of the life of this man, able to end his slimy career—but to do it in some such way that it would bring no disgrace to my friends, particularly not to Maria. She mustn't be a murderer's sister.

"Months previous to Telfer's re-appearance, I had been feeling the urge again to complete my old hypothesis. Other scientists, since my first lone glimpse many years ago below the atom division of matter, had actually found my Posits and Negons, had established them as electrons and protons.

"More than that, too, gentlemen! They had found the electrons and protons behaving as I had conceived; infinitesimal electrons, moving in infinitesimal spaces, about an infinitesimal proton—all composing an atom, itself invisible. They did not agree with me at all points—for instance in my belief that matter's visible forms are only the various rates of motion in that electron-proton dance. They did not say as I, that iron is iron only because of its particular electronic rhythm.

"But they did admit the motion. And besides finding my electrons and protons, science in the ten years that have elapsed had eased another task for me by having already discovered a way of counting those high vibrations—the first step I would have had to take in testing the truth of my theory. I took this gift of Science and went on along my own path.

"The motion which science admitted I conceived to have a different frequency in every kind of matter. I conceived that an exceedingly high frequency manifests as great density and solidity. Such perhaps is iron. Another frequency—not so high, slower in other words—manifests less density, and we might say the matter is wood."

● Maitland's scientific mind was responding eagerly to all this.

"But here," Dick continued then, "was the most important conception I had of this frequency in the electron-proton infinitesimals—the idea that that frequency could be interfered with! Interference could take one of two forms, I believed, just as you might interfere with a mob by taking control of its actions, or interfere by breaking it up. One would be the interference of forcing that mob to obey a different impulse; the other would be the interference of throwing a bomb that would disrupt it.

"I did not believe it was possible at once to learn the secret of steady control—that would be the tremendous dream of commutation. I thought it would be easier to learn to disrupt my predicated matter frequencies. I had long believed that I could do this by projecting another frequency into them, closely similar, but yet different, causing mixed cycles—a tangled frequency that would throw them off their rhythmic balance.

"From this disruption and my studies of how to accomplish it, I believed I would learn at last the deeper secret of steady control.

"How was I to generate them then, my high disrupting frequencies—counter-vibrations, you might call them?

"Europe at the time was using high voltage electrical shocks. Their method did not interest me. If I were right, they would fly apart themselves—these little worlds—if I could interfere with their vibrations. But I had to reach into them somehow.

"I had been considering complicated and bulky equipment.

"But while I played the Brahms' to Telfer for the torment of his soul, an amazingly simple idea came to me—Biglio's hint of course—those endlessly multiplying, endlessly high vibrating overtones that could be created so simply and in such limitless varieties of pattern."

I recalled as Dick said this, my own computations from Biglio, and the interesting vista he'd opened.

"Take Lander's C, for instance," Dick went on again, "with its rate 264.2. It would first generate its double, then the double would double, and so on. The note beside it, C sharp, has a vibration of 278.4 and its endless multiples would be of that specific 278.4 pattern.

"From that moment on, it is hard to say—and I wish to be honest with you all—which incentive spurred me most, the truly scientific one of reaching down into the atom's heart, or the selfish one of wishing a means at hand to end the evil Telfer under the eyes of a roomful of people who could see that I had laid no hand upon him. But whichever it was, I went on.

"Of what atom then, should I proceed to ascertain the rhythm so that I might see if I could interfere with that dance; and whether the atom would then burst apart, as I strongly believed it must? Since I had a two-fold purpose in mind, it had to be an atom the breaking down of which could be used to Telfer's undoing. It had to be one I could have at hand for perhaps long continued, much repeated experiment, in the quiet of my laboratory. If I succeeded and the time came to use it, it must be matter peculiar to Telfer and not to others present. I settled on his beloved tablets, knowing your habits did not include them."

I thought of Maria and the way she had fainted and toppled. I couldn't refrain from speaking of that.

"Chance nearly dealt you a blow there, Dick," I said, and he gave me a startled look.

"Chance?"

"Yes. In spite of your knowledge of our habits, Maria by the merest coinci-

dence" had taken aspirin some hours before. Fortunately it had vanished almost completely by solution."

Haidley had come alert in his chair, and I knew he was picturing with horror what might have happened to Maria too. I wondered if it occurred to him then how the remaining tablets he'd carried had sprayed up the front of his waistcoat and puzzled me for so long.

"As it was," I said, "the effect was very slight. She fainted while you were in the other room." I wondered about that odor though.

"Good God!" he said in horror.

There was silence after that awhile before Dick went on again.

"Well, as I've told you already, I chose one of the atoms of aspirin—which one is not important here. I secured a supply of the particular aspirin which Telfer used, and went to work in my laboratory. That was nearly five months ago.

"It took me almost three months, even with the most modern advantages, to ascertain the whirling rate—the vibrating rhythm—in the electrons of that particular atom. Almost day and night I worked.

"But at last I knew the dance in which these particular infinitesimals were swinging.

"The next job was to be my most exciting. I had now a known rate. I shall not name it here, but for illustration, 106,905.6 will do—per second, understand. The misleading vibration rate I have given is as a matter of fact a multiple of the vibration of G sharp. The number I've given you, divided often enough by two would finally come to 417.6, the vibration, as I already have stated, of G sharp.

"Of what then was my unnamed discovered rate a multiple? What piano note sounded—to break into its endless doubling vibrations—would finally total the number of vibrations I had discovered in my particular atom's electrons? You might say it was a simple matter to decide, that I had only to keep dividing it by two until I came to a vibration in the piano scale, and there would be my note.

"In the essence, of course, you are right. But in actual computation, it was a more Herculean task. For the doubling isn't all; I used that only as a simple example of the possibility of it.

"As a matter of fact—you'll recall this, Lander, from the paper you picked up—C or any other note goes through sixteen phases of breaking up—it was exemplified in Biglio's staff again—through sixteen phases of re-vibration. And doubling is only one of them, each step being more complicated than the last.

"It was nearly two months after my discovery of the electron rate in the atom of my aspirin molecule, before my first computation was complete and had been reduced from that high number I have *not* named, to a vibration in the piano scale.

"I then faced the final step—whether that piano vibration would go through its phases in order, could be sent back into that electron-proton dance, and what its effect would be.

"I needed a piano from there on."

Straith's face here reflected for a moment the barest whimsical touch, and I thought of what Jane and I had agreed, that there was at no time a piano in the "lab."

• His explanation was absolutely simple.

He had not wished to be asked questions, naturally, about having a piano there; he had secured a simple and not large upright, placed a scientific looking panel in front of it, when it was not in use, with switches, fuses and the like, and thus had merged it completely with the other apparatus of his laboratory in an entirely unnoticeable way.

Straith told us of that with some humor, and went on with his story again.

"With the piano installed and set to the pitch of my studio grand, I was ready for my first attempt, to send back my first return vibrations over the mathematical path I had traced through all its complications.

"I took one of the aspirins then and affixed it at the center of a reflector, a cup-

shaped reflector with its mouth facing the piano—the source of my forthcoming vibrations—with the little disc of aspirin at the focus, as you might say, of the cup. This would gather and further concentrate the oncoming assaulting vibrations.

"Then I began sounding the note I'd computed—the fundamental which multiplied through its sixteen stages, that should reach finally that desired high vibration there in those invisible electrons.

"I seemed doomed to disappointment. Nothing whatever happened.

"I checked very closely for result, because it might be—dealing with such invisibles—that a slight effect had occurred that was not readily visible. It was clear, though, at last, that I hadn't affected the electrons.

"Still I was not yet discouraged about my theory; I might have made an error of mathematics. So I checked my computations again. I'd completely forgotten Telfer in the true scientific excitement.

"At the end of another week it was certain that my computations had been right, even to the seventh decimal.

"I had the piano rechecked to see if laboratory temperature had lowered or raised the ordinary vibration rate of its strings. Then I began to send forth again my interfering vibrations.

"This time I was really disappointed when I could find not the least effect."

Dick paused—recalling that moment of disappointment, no doubt—and in his silence there came no sound from the little group around the fireplace. Finally he went on again.

"I decided to do no more checking, to take the rest of that night in thought. Daylight found me still at it, and I scarcely left the 'lab' all day. I even forgot to eat. And I smoked rather more, I expect, than old Chris there would approve.

"That evening, though, I'd reached a conclusion. You see—Lander knows already, and I've already mentioned it here—my projected vibration was meant to unbalance the natural one in the electrons by being *near* their vibration but not exact, to clash and interfere.

"I concluded, therefore, that my piano fundamental was too exactly in vibration, and that as a result, my vibrations were simply being absorbed. They were in *harmony* instead of opposition. So I did the thing that I suppose I should have known I must do all along.

"I destroyed the harmony; I introduced dissonance there."

Gordon at this mention of dissonance flashed me a remembering look, recalling how we had been about to discuss that when Maitland came that evening. I don't know whether Gordon, in saying that Straith had introduced dissonances into the Brahms', had sensed their purpose or not. Dick was speaking again.

"Dissonances! Discord, my friends! Even in music, as in life, dissonance can be the enemy. Dissonances, unsocial, fitting with nothing—unpleasant even to the ear. Dissonances should be my gunmen! Unseen emissaries of disharmony, mixed with the vibrations of harmony in my computed fundamental! Stealing to the little proton-electron universe across the interplanetary space of my laboratory, to set disorder there amongst order.

"Imagine them, gentlemen!—little evil devils, setting out from my piano, voyaging across what was for them millions of miles of space for their assault upon that aspirin world.

"That night, October 12th it was, I found, for the first time, a trace of whitish powder on the lower lip of my large cup-like reflector. Some one of my dissonant shocks had undoubtedly deposited it there.

"But I had been using a variety of them and—momentarily off of my guard, for I had been doing it hours on end—was not aware which particular dissonance had accomplished it, had shaken the rim of that little world that hung there fixed in my reflector like a star in empty space.

"I retraced and got the powder again. And this time I knew the dissonance."

Straith stopped at that, and in the quiet studio, the faces of the group were a study. They might have been sitters at a seance. Dick's eyes were aglow with a strange fire and I knew he was living

again that palpitating tremendous moment on the very edge of his discovery.

"It was time now to proceed cautiously," he said. "I removed from the reflector therefore all but the tiniest piece of aspirin. I dissolved all the spare tablets I had. These were merely precautions, of course; for whatever might take place would occur in free air and unconfined; and unconfined, even gunpowder may disrupt with little damage. On the other hand, I moved the cup-like reflector closer to my vibrational source, the piano.

"I felt now I was to know the end. If these were the erratic vibrations to tear apart this little world, what new matter might be there soon, in the center of that reflector? It *could* be anything, you know. Suppose it were by some chance gold, the age-old dream of alchemists!

"I started my dissonances again.

"Up to now, remember, I had never struck that little white world with more than two successive concussions; ceasing each time at the mere loosening of its rim. Now I would send them out wave on wave, sustained, and I hoped effective. Would my interfering frequencies confuse the electron dance?"

● A back-fire in the street at that moment startled us—with the possible exception of Straith, as though already he had heard the cataclysmic crashing of one of his little worlds. But he went on with his story undisturbed.

"Dreaming, watching the keyboard, with Telfer and his petty schemes faded far off in the background, freeing and setting forth my dissonances, I felt suddenly a rush of air. A strange odor assailed my nostrils, and instantly, gentlemen, before my very eyes, I found my reflector empty—nothing at all there to be seen, and only that strange, strange odor was left.

"Excitedly I seized the reflector and examined it with the microscope. Under a 100 magnification there was just the tiniest perceptible bit of dust on its lower rim. And nearer the reflector the odor was noticeably stronger and strange, I tell you

—strange even to me who in my time have smelled all the gases.”

When Straith mentioned that, I knew of course the answer to that odor that followed the puff of white in that moment when Telfer died, the fainter odor too when Maria had toppled and fainted. But I said nothing, for Dick was going on.

“I wanted to try again, but I had cautiously dissolved all my aspirins. I ran blocks for more, in the night.”

This then was that strange excited running that Jane had related to me.

“I secured them at a nearby store. I hung another tiny bit in the reflector, a little world the electron dance of one of whose atoms I could disrupt. I set it up like a crazy god, to smash it again in play.

“I set up a second little world in a reflector at a greater distance.

“Once more came the dissonances, wave after wave of them!—once more the rush of air—not strong, and that strange new odor again. And once more nothing remained, absolutely nothing, but the tiniest residuum of powder.

“My farther distant world however, was intact. I concluded, though I have not yet checked this, that a longer continuance of the dissonances would undoubtedly have done for that too. Distance diminishes the intensity no doubt with which the vibration arrives. There is a certain amount of absorption, too.

“You had to figure absorption?” I asked, though I hadn’t intended to interrupt.

“Yes, Lander,” he answered. “The absorption coefficient of the body of a person was noted on that crumpled paper you picked up.”

“I remember—4.7,” I repeated.

He nodded and went on again.

“But my nearer world—I had shattered it!—destroyed it, gentlemen!—and created in the doing, new matter; this hitherto unknown gas. Kreon I decided to call it. That it was a new force I had no doubt, from the rush of air each time that attended its creation and launching.

“I found later, as a matter of fact, that a full tablet under prolonged wave stimu-

lus, up to a maximum distance of twenty feet, would burst almost any container.

“I had smashed the atom, gentlemen! There was news for a blasé world! The only being of all our kind—to have entered into one of these little universes.

“Do you remember Satan in Milton’s ‘Paradise Lost’?—after his endless trip up through Chaos, after voyaging through the blackness of a directionless nowhere, emerging at last guided only by an instinct of his own, to find this shining new world on which we live. I felt a little of the pride and exultation in my moment, that must have been his, in his single-handed achievement.

“It wasn’t until hours after that I thought of Telfer again, Telfer, who, as a matter of fact, had driven me back again to grapple with my hypothesis.”

Straith was silent a moment, considering, and dreaming too.

“It’s rather too bad,” Maitland said, “that you came back to Telfer at all.”

“I never intended to,” he told us quietly then. And I knew that he spoke the truth.

“Somehow, once I knew I had the power to end him with the very instrument of his own choosing, by tearing apart the electrons of the thing he would administer to himself, my grudge completely died out.

“And still—” I said, thinking of that night and Telfer lunging there.

He considered a moment quietly.

“I don’t know, Lander,” he said at last, “whether I can make you understand that or not. After you had all finished with Haidley’s picture, I sat down to play as usual. At first I was not particularly conscious of Telfer; I wasn’t even determined that for once I mightn’t forego the Brahms.

“But several times I intercepted his look at Maria, when he didn’t think he was observed, and I tell you gentlemen, it was vile. I saw red. My mind changed involuntarily. I *would* play the thing he hated. More than that, I decided to see if I couldn’t reach into his physical self—not to kill, but to shock—with those

single dissonances such as at first merely powdered the rim of my little worlds.

"He had taken his tablets as usual—three of them, I remember. I decided to try the experiment of shocking him somewhat at least. Did you notice, any of you, by the way, the type of thing I played?"

Had we noticed indeed! It had been that above all that had struck us from the first. I did not say so in so many words. But I told him we had felt the weirdness of it.

"The discovery," Straith went on, "that these particular musical selections—of course there are hundreds more like them—were rich in dissonances that closely approached those of my formula, was one of the interesting aftermaths of my experiment. I don't know whether these really inspired composers have sensed dimly and unconsciously or not, a scientific principle. But the similarity is there—the near approach in such fantastic music to dissonances that are really disruptive.

"At any rate, these compositions were peculiarly suited to my intention to insert my own formulated dissonances at will without too much changing the music. I intended to send with them, shock after shock into Telfer, for the actual petty pleasure of seeing him bewildered, baffled, and frightened before me. As I played, the frequent recurrence of these dissonances came to sound to me just a little like tom-toms—if you get just what I mean."

● Tom-toms in a jungle night—that was what I had said myself. And Gordon had thought so too. Straith was speaking again.

"And presently," he went on, "presently, as I played and saw my music quieting and affecting you all, I think I began myself to be fascinated. More and more difficult I found it to take my fingers from those dissonant chords without sending their full power toward Telfer. And more and more fascinating I found the contemplation of returning to them again. It was a sort of hypnosis, I suppose, or maybe something like that strange attrac-

tion that tempts you to step off high buildings, or into the vortex of Niagara.

"Then, finally, I did play the Brahms', and somehow, for the first time in months, the pain-racked face of Joan haunted me. I could smell the flowers of that conservatory back there eleven years ago, where he had smiled his evil smile. And I thought of Maria, and other Marias and other Joans to come . . ."

As Dick's voice trailed off a little, I fingered the sheaf of papers in my lap, the papers he'd handed me.

"I swear I don't remember deciding," he said. "But suddenly I found my left hand repeating beat after beat—but in succession now—beat after beat those fatal dissonances. And at the very moment, I realized that Telfer came clean out of his chair, and dropped back, and I knew well enough he had gone."

One thought of that puff of white that had been an exploding world, and of what disruptive forces at the same moment had been unloosed inside of Telfer. I recalled vividly: as well the craters in Telfer's cheek, and remembered too the aspirin that had disintegrated upon his dresser.

I wondered about Dick's sudden disappearance too, when I'd missed him from the kitchenette. Quietly I asked him about that.

I was almost disappointed to find that there was nothing mysterious in it; he'd gone up to the roof for a minute. He added no more to that. But I suspect it was to be alone under the sky. There may have been devotion in that.

I had to inquire too, into that pilgrimage he'd made to the lab the night that Sergeant Stickney was watching. I was curious as to what it was he had burned, what he had watched go up in smoke there above the Ming vase.

"Only figures, Lander," he said, "figures set against notes of the Brahms' Waltz. I burned the music that night and the figures of my original computations as well."

For a moment after that, he said nothing, nor did anyone in that room. And we thought of the thing he had discovered,

Strangely I thought little of Telfer, but instead of the new terrible force Straith had loosed that so dangerously for the maliciously inclined was no farther away than one's piano.

"Lord, Dickie," I said at last, "think what an entrée to death! What a weapon you have made of an instrument meant for the swelling of the soul! Think—one needs only a piano!"

He looked at me for a moment from far off, then realized slowly what I was saying.

"Rather more than that, Lander," he parried. "One would need to know the vibrational formulas for many densities of matter. Aspirin wouldn't always do. He would need to have more than a smattering of scientific mathematics, and a considerable knowledge as well of the little-known mathematics of music."

"But there are such people, Dick. There are misguided scientists too. And there are criminal minds of great genius. Given a little start, how tremendously far they might go."

"Yes, you are frighteningly right," he said, "and, still think what it means to have found a path across space to the very atom's heart, to be the only person in all the world to have reached in among the electrons! Think what it would mean, even to a greater man than I, to have the world say of him: 'There goes the man who has looked almost on the face of the gods!' For I could go on, you see, and on. In another month another atom, another dissonance, then another and another. Heavens man!—in time, one could play the world—"

He stopped at that, but his eyes were alight with the vision. I knew what he

said was true, and it was terrible to contemplate. After a moment he went on more quietly.

"For the present, though, only one atom. And for the present one dissonant group. And apart from you gentlemen and myself, no one has even an inkling of that. My theory, as far as the world knows, is just where it was eleven years ago.

"The only information in all the world to the contrary exists in two sole places, here in my brain, and there in those papers on your lap. A ten thousand word thesis, Lander. What shall we do with it?"

I rose and went toward his fireplace, and the others said not a word. And as for Straith sitting there, he never moved a muscle. I stood very close to the embers.

"Would you care," he said quietly, "you who have spent your life always in pursuit of the elusive—the others will agree to your right—would you like to be one of two people in all the world to have looked with quiet eyes almost to the end of things?"

I thought of that, vastly thrilled, and awed a great deal, too. To be one of two in all the world to have looked almost over the edge of Infinity, one of two to hold an amazing knowledge now about to be lost—and lost perhaps forever. Straith could see that that intrigued me.

"The ninth page," he said.

Slowly I turned the sheets. I looked at the strange sinister chords, so innocent in outward appearance, yet with the secret of disruptive chaos lurking there in their higher vibrations.

Then I tore the sheets across and laid them among the flames.

THE END

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JUSTICE OF THE ATOMS

By Charles B. Pool

(Continued from page 179)

There was a world of sincere feeling in Crone's voice as he gasped his answer.

"I certainly will. I swear to that!"

"Very well. It is best that you leave Oakbury, so that strangers may trust you; your acquaintances never will. I shall give you a 500-mile start away from here. You will awake in the hilly country a few miles north of New Castle, Pennsylvania, where you may easily find human aid and the means of reaching people. You will travel painlessly and safely, which is more than you deserve."

Crone was removed from his chair and seated on a plate glass block set on a dais of the same material; a lead plate weighing several tons was erected on each side of him; a long-distance "destinator," as Jones called it, was set in position and sighted with the aid of a fine compass and several other surveying instruments, and the professor reached for the switch.

"Let us hope we do not have an earthquake or anything," he said, "for a quarter of an inch displacement of the destinator arm at the right moment would result in a most embarrassing accident to the subject."

Then the switch closed, and the space between the plates was empty except for the block of glass and a tiny object that fell to the floor with a clink.

"Glass I do not choose to move," said Jones. "Otherwise, friend Crone's clothing and all will be as intact as his body, excepting only the glass crystal of his watch." And he picked up the crystal, which had fallen.

"Now for the principal business of the evening," continued Jones. "Gaffio, bring up Black Golo."

Golo's legs were liberated and he was placed on the glass seat between the two lead plates, where he was secured in place. He was trembling like a leaf, visibly disturbed.

"You try any of your funny work on me," he blustered, "and my gang'll get

you. They've laid out thirty-two better men around this town before now."

"So?" replied Jones. "Well, I think I can deal with them. As for you, I shall give you also a good start out of Oakbury."

He made the same motions as before, but Ladory was a little surprised that he did not tighten the set screw that held the destinator still. At last, all else being ready, he laid one hand on the switch handle and one on the rubber handle of the destinator. As the switch closed he jerked the destinator handle to the limit of its range.

"Talk about distribution," he calmly remarked, "Mr. Golo's atoms are now spread from the Canadian line to the Gulf of Mexico, mostly down the Mississippi valley. I could not pick them up myself, and I am quite sure no one else knows where they are."

Vince Ladory's features must have shown some of the horror he felt at this cold-blooded execution, but the big man only smiled.

"You would doubtless call me a murderer," he apologized, "but what of a district attorney and a mass of judges and police commissioners and other law-enforcing officials who let Golo run loose while he commits thirty-two murders? Am I a murderer because I do what the law has failed to?"

He glanced at the four remaining gunmen, whose scurvy, degenerate faces were blanched with terror.

"I think, Mr. Ladory, that I shall spare you any further part in this ordeal. I have still to dispose of these gentry"—waving a generous palm toward Black Golo's followers—"who, being only hired killers, are a little lower than their employer. I think I shall send them as far as Utah and Old Mexico, via the spray effect that I used on their boss. And these two police inspectors, who have been spending more money per month than the city paid them

in a year—perhaps I ought to distribute their atoms also, but I am soft-hearted. I think they shall have the same chance as Attorney Crone.

"See that the papers containing your report of this do not go on the streets before five a.m., I will now liberate you, but do not send the police nor anyone else here. I might have to deal harshly with them. Gases, transported by my method, can be very effective."

● Aside from the confessions of Crone and Black Golo, Vince Ladory's report was never published, as his editors did not want their sanity questioned, and the story seemed unconvincing. They did, however, tip off the police the next day that something unusual was going on in the Wangerman Building, but when the uniformed men arrived at Room 1314, it was empty. By atoms or otherwise, "Professor Jones" had departed.

THE END

THE MEMORY MACHINE

By Bernard Sachs

(Continued from page 201)

"Yes," replied the old man sadly. "Our experiment is a failure."

"A failure!" Astonished, Howard moved a finger to indicate the fraternizing forces.

"There's Hubert," Dr. Stephens said. "He came as an enemy."

"Hubert?" repeated one of the erstwhile foes, overhearing. "He was in the arsenal at three o'clock. He did not take the augmemory."

Dr. Stephens lifted his head. Howard and Ruth could see through his eyes the light that shone within him.

THE END

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A THIEF IN TIME

By Raymond A. Young

(Continued from page 203)

One day, tired out from a strenuous morning, Carponi left his office earlier than usual in the afternoon and decided to go to his apartment to rest.

His neat little plane carried him from the office building to his home in a few minutes, where he parked it on the roof.

His first indication of anything wrong appeared when he found his door slightly ajar. He stopped short in amazement when he entered the apartment.

In the center of the room was a shining metal disk!

A flood of memories seemed to break into Carponi's mind all at once. *Where had he seen that disk before?* Suddenly he looked at the clock. It was a few minutes past three. Circumstances began to form a long forgotten link in Tony's mind.

The sound of sirens, the echo of an explosion. Yes, Tony had lived through that before! The sound of running feet, and Carponi saw himself as on a screen, leap

onto the brightly shining disk, just as he had done twenty years before.

His mind was whirling as he saw the disk fade from view. Someone was beating on the door. He walked toward it and stumbled on an ancient automatic which he had dropped *twenty years ago*.

The thumping continued on the door and someone was demanding that he open in the name of the law.

Disgrace.

Humiliation.

He could see his whole background traced. He could see his twenty long years of going straight crumble before the police investigation. Screaming banner headlines in the morning papers floated before his eyes:

**"FAMOUS RADIO HEAD ROBS
GOVERNMENT OF MILLION
IN RADIUM . . ."**

He pressed the gun against his forehead and pulled the trigger. . . .

THE END

THE ROCKET ENGINE

Condensed and Translated from "Pravda," Moscow

Nicolai Ivanovich Kibalchich, student, inventor and assassin, left to the world on his death in 1881 a great legacy. Tragic as was the death of Kibalchich, the fate which befell his invention was even more tragic.

Several days before his execution, this student of the St. Petersburg Institute of Transport gave to the Prison Governor the design and working details of the first Rocket motor, with the request that they should be handed over to a committee of Scientists for a thorough investigation. After the execution, Kibalchich was forgotten; his papers and designs taken by the legal authorities and duly filed, and also forgotten.

It was only after the Revolution that the documents were examined; the design was discovered and studied. In 1918 they were published for the first time after a careful scientific examination by Professor K. E. Tsiolkovski. This publication of the design and thesis has led to further study and experiments.

With the usual internal combustion engine the force of the explosion of the mixture in the cylinder does not produce direct motive power, since it has to be utilised first of all in turning a crank shaft. It was the desire to eliminate the resultant losses in energy which led Kibalchich to consider the rocket in his endeavour to produce a motor which would give a drastic increase in the utility of the power generated.

Scientists have now turned their attention towards a search for a motive power with direct recoil, and the rocket is the most promising. The results show that the reactive engine is about to become a reality.—Submitted by J. B. Harris.



Science Questions and Answers



THIS department is conducted for the benefit of readers who have pertinent queries on modern scientific facts. As space is limited, we cannot undertake to answer more than three questions for each letter. The flood of correspondence received makes it impractical, also, to print answers as soon as we receive questions. However, questions of general interest will receive careful attention.

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The Elements in Dirt

Editor, SCIENCE QUESTIONS AND ANSWERS:

A month or two ago I asked you a couple of questions for the first time, and I was very much pleased with my answers in the April issue of WONDER STORIES. Now I have some more questions. I have been reading quite a bit of stories about the different moons, or satellites, as you call them. Now:

1. Will you please make a table showing the moons of all the planets which have moons, their distances from their mother planets, and their names. If possible, without taking up too much room, I would like to have their diameters.

2. What elements would ordinarily be found in an ordinary shovelful of dirt, not counting any trash or anything that might have been put there by man; just plain, everyday, mother earth?

I suppose you will think the last question an extremely "dumb" one, but I have often wondered about it.

ROY TEST, JR.,
Member 417 SFL,
Los Angeles, Calif.

(A detailed diagram, such as you ask for in question one, appeared in our May, 1934 issue of this department, which number can be supplied to you by our subscription department.)

We could not give you the percentages of elements in a shovelful of soil, for the simple reason that there are thousands of different mixtures throughout the world. However, most dirt is composed chiefly of silicates, with various percentages of calcium, aluminum, magnesium, iron, and other elements. In central New Jersey, stretching across the state from Perth Amboy to Trenton, you will find that the soil is mostly clay. A little farther down it is almost entirely sand—practically all silica. In the southern section of the state, where you find so much truck farming, there is a great quantity of loam—which contains much vegetable matter.—EDITOR.)

Predicting the Weather

Editor, SCIENCE QUESTIONS AND ANSWERS:

How can the weather bureau tell us whether or not it is going to rain tomorrow, etc.? I would like to know just how they get their information, and why they are wrong so often. Is it just good guessing?

R. B. WOLFE,
Flint, Mich.

(There is a science called meteorology which is the study of atmospheric conditions, especially weather and its changes. There is a map prepared twice each day by the meteorologists in Washington, D. C., which can be found reproduced in many newspapers. This map shows the temperatures at the stations throughout the United States and southern Canada, the wind directions, precipitation, barometric pressure, and a "freezing line." If any, As a rule, the low-pressure areas move from west to east and north to south. When a "high" area of higher barometer readings follows a "low," we usually find clearing weather; but a "low" following a "high" signifies that it will be unsettled and stormy. About high-pressure areas, the winds, as a rule, rotate clockwise and counter-clockwise around the low pressures.)

Unpredictable shiftings occur now and then, and the weather bureau claims to produce accurate predictions only about 85% of the time.—EDITOR.)

The Hermaphrodite

Editor, SCIENCE QUESTIONS AND ANSWERS:

I have often wondered just what a hermaphrodite is, and have received various and varying opinions from friends and teachers, but nothing that left a definite impression in my mind. All I know is that it is a sexually abnormal person. I would like to get

well as the answers to each section. All papers submitted after June 21, 1935, will be invalid. This test will not be repeated in future issues. A new test will appear in the January, 1936 issue for new members. All problems should be answered from memory and we depend upon the honesty of members not to do any research or consult other members while taking the test. Each test must be done independently. Send all papers to The Science Fiction Test Judges, c/o The Science Fiction League, 90 Hudson St., New York City, N. Y. Members in foreign countries, not on the North American Continent, are given until August 21, 1935, to complete the test. If you are not a member, but would like to take this test, send in your application to us with the test.

PART ONE:

General Quiz on Science Fiction 25 at $\frac{1}{4}\%$12 $\frac{1}{2}\%$

PART TWO:

Multipleschoice 25 at $\frac{1}{4}\%$12 $\frac{1}{2}\%$

PART THREE:

Completion 25 at $\frac{1}{4}\%$12 $\frac{1}{2}\%$

PART FOUR:

True and False 25 at $\frac{1}{4}\%$12 $\frac{1}{2}\%$

PART FIVE:

Essays on Science Fiction 2 at 5%.....10%

PART SIX:

Personal Opinions 4 at 2 $\frac{1}{2}\%$10%

PART SEVEN:

General Science 30 at 1%.....30%

100%

The results of this test will appear in our October number.

PART ONE

General Quiz on Science Fiction

1. Who is known as the "cover-copper"?
2. "Armageddon—2419 A.D." introduced what character, now famous?
3. Who wrote the "Posi and Negs" series of stories?
4. On what famous novel did Lee Hawkins Garby collaborate?
5. "Island of Lost Souls" was the scientific title for what story by H. G. Wells?
6. Name three science-fiction cartoons now appearing in newspapers.
7. What was the title of Jack Williamson's first published science-fiction story?
8. Is imagination necessary for a person to enjoy science-fiction?
9. Why shouldn't the science in science-fiction be very technical?
10. Name two stories by Morrison Colladay about a cosmic gun.
11. Who coined the word "scientifiction"?
12. Who wrote stories about the Interplanetary Flying Police?
13. "The Blue Barbarians" was written by what famous master of satire?
14. What well-known science-fiction story was written by Mary Shelley?
15. Name three things science-fiction fans are clamoring for.
16. During what years was Air Wonder Stories published?
17. What are the aims of the Science Fiction League?
18. When was the above-mentioned society organized?
19. Who does a lot of science-fiction translating from the German and French?
20. What nationality is Charles de Richter?
21. What is John Taine's real name?
22. What continent is the locale of most of A. Hyatt Verrill's stories?
23. What is the correct method of abbreviating the word "scientifiction"?
24. Who wrote "The Conquerors," a favorite novel of five years ago?
25. In whose work is Detective Taine a famous figure?

PART TWO

Multipleschoice

1. John Carter is: (1) author (2) character (3) fan (4) artist.
2. "Metropolis" was a scientific about: (1) Atlantis (2) the stratosphere (3) the future (4) the moon.
3. Barsoom is the name for Mars used by: (1) Hugo Gernsback (2) Otis Adelbert Kline (3) Carl H. Claudy (4) Edgar Rice Burroughs.

4. Bob Olsen is noted for his: (1) space stories (2) treatment of the fourth dimension (3) theories on time-travelling (4) Norwegian atmosphere.
5. Northwest Smith is an interplanetary outlaw in the stories of: (1) Ralph Milne Farley (2) C. L. Moore (3) Leslie F. Stone (4) Otto Will Kill.
6. The "Tamithak" stories were written by: (1) P. Schuyler Miller (2) Charles R. Tanner (3) George Bernard Shaw (4) H. G. Wells.
7. The first quarterly magazine appeared in: (1) 1827 (2) 1828 (3) 1929 (4) 1930.
8. The first Chapter of the Science Fiction League is located in: (1) Chicago (2) Boston (3) Brooklyn (4) New Orleans.
9. An artist no longer illustrating science-fiction stories is: (1) H. W. Wesso (2) Frank R. Paul (3) Leo Morey (4) Lumen Winter.
10. The Clayton corporation used to publish: (1) Wonder Stories (2) Astounding Stories (3) Amazing Stories (4) Miracle, Science and Fantasy Stories.
11. The "Skylark" novels were about: (1) time-travel (2) giant termites (3) space-flying (4) the next war.
12. A popular female author of science-fiction is: (1) H. G. Winter (2) D. D. Sharp (3) A. L. Burkholder (4) L. F. Stone.
13. Stanton A. Cohlenta is noted for his: (1) satire (2) burlesque (3) mysteries (4) short-stories.
14. Hugo Gernsback's first great science-fiction novel was: (1) The Conquerors (2) Ralph 124c-41 plus (3) Baron Munchhausen (4) Frankenstein.
15. Dr. Hackensaw's Secrets appeared in: (1) Science and Invention (2) Practical Electronics (3) Electrical Experimenter (4) Modern Electrics.
16. One author who uses a pen-name is: (1) A. Merritt (2) Eric Temple Bell (3) Arthur J. Burks (4) Laurence Manning.
17. The Dr. Bird stories were written by: (1) Murray Leinster (2) John Edwards (3) Epaminondas T. Snooks, D. T. G. (4) Capt. S. P. Meek, U. S. A.
18. The author with the greatest amount of stories to his credit is: (1) Philip J. Bartel (2) David H. Keller, M. D. (3) R. F. Starzl (4) Jack Williamson.
19. Edmond Hamilton wrote: (1) The Time Stream (2) Off on a Comet (3) Dawn to Dusk (4) The Hidden World.
20. "The Revolt of the Pedestrians" was the first published story of: (1) David H. Keller (2) Clare Winger Harris (3) Festus Pragnell (4) John Russell Fearn.
21. Most science-fiction is published in: (1) London (2) New York City (3) Chicago (4) Los Angeles.
22. Frankenstein's monster on the screen was played by: (1) Boris Karloff (2) Bela Lugosi (3) Lon Chaney (4) Will Rogers.
23. The best science-fiction is based on: (1) vampires and ghosts (2) scientific fact and theory (3) the horrors of war (4) love in the future.
24. Science-fiction's first magazine came out in: (1) 1925 (2) 1926 (3) 1927 (4) 1928.
25. A science-fiction author who was also a great astronomer was: (1) Garrett P. Serviss (2) Jules Verne (3) Edgar Allen Poe (4) Nathaniel Hawthorne.

PART THREE

Completion

1. "Anachronism" was a sequel to _____.
2. LN-18 was the name of the heroine of the scientific film entitled _____.
3. "_____ the Conqueror" is a famous story by Ray Cummings.
4. "F. P. I." stands for _____.
5. _____ annual science-fiction magazine (s) has (have) been published.
6. There were as many as _____ different science-fiction magazines on the newsstand at one time.
7. A book has recently been published containing _____ of H. G. Wells' novels.
8. The first great science-fiction novel is named _____.
9. Edwin Balmer and _____ wrote "When Worlds Collide" and its sequel.
10. Laurence Manning writes science-fiction only for _____ magazine.
11. "Mannape the Mighty" was written by _____.
12. Arthur Leo Zagat once collaborated with _____ on many stories.
13. The motion picture "Deluge" was taken from the story by _____.

14. Pluto was the locale of Stanton A. Coblentz's novel named _____.
15. The first popular time-travel story was _____ by H. G. Wells.
16. Many stories have concerned mad _____ conquering the world.
17. Laurence Manning's most famous series of stories are _____.
18. A. Merritt's best novels appear in _____ magazine.
19. "Men With Wings" was written by a woman named _____.
20. All the professional science-fiction magazines are edited in _____.
21. _____ is the author of "Dawn to Dusk."
22. The editorial offices of _____ are at 99 Hudson St., New York City.
23. One editor of a science-fiction magazine is Dr. _____.
24. There are _____ major science-fiction magazines being published now.
25. The team of Arcot, Morey, Wade, and Fuller appeared in novels by _____.

PART FOUR

True and False

1. H. G. Wells' first name is Hubert.
2. Hugo Gernsback's Science Fiction Series contains reprints.
3. Garrett Smith wrote "A Columbus of Space."
4. Brown draws the covers for Amazing Stories.
5. Ray Cummings' best novels concerned visits to Pluto.
6. "Suggestions to Authors" have been prepared for the authors of Wonder Stories.
7. Astounding Stories contained a monthly scientific editorial.
8. "Off on a Comet" appeared in the first Wonder Stories.
9. Miracle, Science and Fantasy Stories published only two issues.
10. Knute Savory was the hero in a famous novel by Richard Vaughan.
11. Morey draws steadily for Argosy magazine.
12. Andrew Lenard, a science-fiction movie producer, lives in Budapest.
13. Colonel Marsh is a character in the stories of Laurence Manning.
14. "The Diamond Lens" by Fitz-James O'Brien first appeared in 1912.
15. Lem Gulliver was the leading character in four published stories.
16. J. Harvey Haggard wrote the Space-Guard stories.
17. Dr. Keller's first story was about giant termites.
18. Kenneth Sterling wrote a burlesque published during 1934.
19. "When Reptiles Ruled" was a story about the distant past.
20. Doid had some illustrations in Miracle, Science and Fantasy Stories.
21. Fantasy Magazine is a publication for science-fiction fans.
22. "Scope" was a science-fiction magazine published in England.
23. The Science Fiction League was organized in 1933.
24. The readers' departments are always in the rear of the magazine.
25. "What Is Your Science Knowledge" is a monthly department in Amazing Stories.

PART FIVE

Essays on Science Fiction

1. In at least 250 words, tell how you came to read science-fiction.
2. Give your friends' reactions to science-fiction in no less than 250 words.

PART SIX

Personal Opinions

1. Who is your favorite science-fiction author and why?
2. What is your favorite science-fiction character and why?
3. What is your favorite science-fiction story and why?
4. Do you think that science-fiction has a promising future and why?

NOTE: All answers in this part must contain at least 100 words each.

PART SEVEN

General Science

1. What is the common name for sodium chloride?
2. What was the pterodactyl?
3. How does the gravity of the moon compare with that of the earth?
4. What is a gyroscope used for in large ships?
5. What is the chemical symbol for carbon monoxide?
6. What is Esperanto?
7. About what subject is the book entitled "The Expanding Universe"?
8. Name two gases used to keep dirigibles in the air.
9. About how far apart are the earth and the sun?
10. What is a protozoa?
11. Has Venus got many satellites?
12. Approximately, what is the circumference of the earth (in miles)?
13. How long is the sun-spot cycle?
14. For what new substance is D₂O the symbol, and what does the "D" mean?
15. Has atomic power ever been tapped?
16. When was the first passenger rocket service started?
17. Where is the Boothia-Felix Peninsula?
18. Where are the asteroids located?
19. Does the Bible agree with the theory of evolution?
20. When can the corona of the sun be seen?
21. What is the popular nickname for Mars?
22. Which is the smallest planet in the solar system?
23. Is uranium higher in the atomic scale than radium?
24. Is there enough air on the moon to support human life?
25. Who is associated with the contraction at light speed theory?
26. In feet, give the approximate speed of sound.
27. What are the ants noted for?
28. In what year was the planet Pluto discovered?
29. Where is air pressure greatest?
30. Which state in the United States has the shortest surveyed boundary?

NOTE: Twenty-five of the questions used in this Second Science Fiction Test were contributed by Forrest J. Ackerman, an Executive Director of the association.

A CORRECTION

In our May issue of this department, we stated that Jack Schaller was the Director of our Lebanon, Pa., Chapter. This was an error, of course. LeRoy Christian Bashore is the Director. The Erie, Pa. Chapter is under Mr. Schaller's direction.

CHAPTER NEWS

This is to announce that our New York Chapter is about to undergo a re-organization. This Chapter is located in the greatest city in the world and has less members than many in small towns—only five members in a population of seven millions! We can account for this only by an unco-operative spirit on the part of the present Director who, as President of a "competing" club, is fighting on the other side of the fence. We want all of our New York members, in any borough, who do not belong to any other New York Chapter, to send in their names to Headquarters stating that they would like to join the New York Chapter under a new leadership. We will be looking for the name of every New York member (not belonging to another Chapter) on our volunteer member list. Don't disappoint us!

Now for some tidbits. Of the brand new Chapter, the one in Austin, Tex., contains some of those making up the Science Fiction Syndicate—a group of fans who plan to become the largest dealers for science-fiction collectors in the world. They are buying up thousands of places of science-fiction from all points of the compass.

The new Leeds Chapter will be able to brag during future years of being the first one organized outside of the United States.

You will notice that our latest Chapter, "East Penn" in Millheim, Penna., is one of those spontaneous ones that have never been announced in our "Proposed Chapters" list. The Director, Glenn Aumiller, is a professor and the Chapter should progress very well under his expert leadership. By far the best article on the SCIENCE FICTION LEAGUE to appear in a newspaper was placed in the Centre Daily Times of State College, Pa., by Richard Allen Frank, one of the Chapter's members. This, of course, makes

Mr. Frank an Active Member. You can become an Active Member, you know, by placing an article on science-fiction or the SCIENCE FICTION LEAGUE in your local newspaper, or accomplishing something which Headquarters considers of equal value to the aims of the LEAGUE. The *Centre Daily Times* has a circulation of many thousands, mostly among students. The East Penn Chapter plans to keep a scrap-book on anything concerning science, secure information on interplanetary travel from the American Rocket Society, and carry on an active correspondence with other members of the LEAGUE.

We see that the proposed Rockdale Chapter ultimately plans to follow in the steps of the Brooklyn branch by issuing an organ of their own. It will probably be called the "Solentexan."

Speaking of the Brooklyn Chapter, the second issue of their "Brooklyn Reporter" has come to our attention. This is a great improvement over their first number and should prove of interest to all members of the LEAGUE. We suggest that you write the Brooklyn director, George Gordon Clark, 8709 Fifteenth Ave., Brooklyn, N. Y., and ask him how you can get it. It is a dandy little science-fiction fan magazine and Chapter organ filled with bits of knowledge that prove those who put it out to be well versed in science-fiction. The Director of this Chapter is appealing to Brooklyn members for a little more co-operation.

Up in Monticello, N. Y., a couple of the members are letting other things interfere with their interests in the local Chapter, the Director, William Rothleder complains. There is nothing that can be done about this until those particular members grow hungry for science-fiction again—which fans always do! They'll come back, Mr. Rothleder.

It seems as though there is a great difficulty in placing editorials about the SCIENCE FICTION LEAGUE in newspapers all over the country—and when one is placed, the member has really done more than is realized. This is due to the fact that most editors consider the announcement as advertising matter because the LEAGUE is sponsored by a newsstand magazine. Lewis F. Torrance of the proposed Winfield, Kansas Chapter makes special note of this. Editorials on just plain science-fiction in general seem to have more success.

Murray Rosaler, 8060 88th Ave., Woodhaven, N. Y. sends in a last minute plea for all those in Woodhaven and Jamaica who are interested to send in to him their names as volunteers to form a Jamaica Chapter.

We are glad to see that the fever is spreading! Now the Lincoln (Neh.) Chapter is also contemplating the issuing of a Chapter bulletin. Headquarters extends to them its sincere wishes for a rapid success. This Chapter has a regular dues of five cents per meeting to take care of the expenses of the proposed publication. In East Penn, the members have agreed to pay 15c a month and a 25c initiation fee. Those college boys just love the new initiation.

The Jersey City Chapter has not as yet chosen its sub-officers. At a recent meeting, the members discussed the possibility of an international Chapter for isolated members.

In recent issues of this department, you have probably noticed the announcement that Clarence J. Wilhelm volunteered to organize the Cleveland, Ohio, Chapter. "Due to lack of time caused by unforeseen difficulties in my personal affairs," he writes, "I shall be unable to continue as Director." We are sorry to hear this and would like some other member in Cleveland to take his place. Where's Jerome Siegel?

On the first birthday of the SCIENCE FICTION LEAGUE, March 29, 1935, letters were sent to the eighteen Directors of local Chapters in the LEAGUE asking for a new, complete list of members. Many have joined since the Chapters were chartered, and a few have dropped out here and there. This new, revised listing will appear in our next issue, August.

OFFICIAL RECOGNITION

On March 29th, we sent in a request to the *World Almanac*, asking them to list the SCIENCE FICTION LEAGUE among their columns of associations for membership. We have not heard from them as yet, but are hoping to find the SCIENCE FICTION LEAGUE officially announced in their 1936 edition next year. We have many more members than a great number of those already listed, and we feel that our aims are just as high and noble as any. We will let you know the outcome of this matter.

ICSC EXPERIMENTS

William S. Sykora, the President of the International Cosmos Science Club, informs us that the organization carried out an experiment in Long Island City, N. Y. on April 14th which consisted in the firing of several small rockets. The ICSC has already done this before and will continue to do it in the future and observe resulting phenomena. We are always glad to hear about the activities of this active science club and would appreciate further information from their headquarters concerning their doings. Those that we feel would be of interest to science-fiction fans we will announce in this department.

OBITUARY

It grieves us greatly to announce the death of one of our members, Mrs. Ida L. Moore of Los Angeles, Calif. She died on April third at the age of 49 years, having been a member of the LEAGUE for less than a month.

RESULTS AT LAST

An article about the LEAGUE which appeared in the *Reading (Pa.) Times* of April 17, 1935, written by LeRoy Christian Bashore, the Director of the Lebanon Chapter, has already brought in several interested persons who plan to join the LEAGUE. This is the first article that has shown any visible results so far. Thank you, Mr. Bashore, and thank you again! You have already placed several articles of this nature and have shown your value to the LEAGUE time and time again.

THE PROPOSED BIBLIOGRAPHY

You will remember that, in our May issue, we announced, upon the suggestion of P. Schuyler Miller, an Executive Director, our intentions of preparing one grand bibliography of all published science-fiction from lists sent in by our members.

J. O. Bailey of Chapel Hill, N. C. has been collecting rare science-fiction for many years and asks us to wait until his bibliography, which he is putting a great deal of work into, is completed, before we go ahead and publish one of our own. We are anxiously waiting for him to complete his work, and promise him to stand by until his preparation is in our hands. We are sure, from the interesting letter he sent us, that his knowledge of all published science-fiction is practically unlimited and the LEAGUE would probably lose a lot without his aid. Meanwhile, we hope to receive lists from other members of the old and rare-out-of-the-way science-fiction they are familiar with.

NOTICES

Members who would like to form local Chapters need only have three members to secure their Charters. After the Chapter is organized, members will come in more quickly.

There are no dues or fees of any kind conducted by LEAGUE Headquarters.

We urge all of our members and readers to send their names to E. C. Reynold, 3235 1/2 Descanso Dr., Los Angeles, Calif., telling him that they will be willing to support any new science-fiction movies that may be produced in Hollywood. These petitions will be submitted to the studios.

Members of the SCIENCE FICTION LEAGUE can secure discounts on current science-fiction books by writing for them to the publishers requesting, as a member of the LEAGUE, the discount such persons are due.

There are still several members who have not claimed their certificates. If you cannot call personally at our office for it, send fifteen cents to cover handling and mailing costs. You will find it necessary to have a certificate in order to enter any Chapter, and for other times when identification is necessary.

Headquarters has prepared a four-page leaflet adopted from our editorial in the May, 1934 issue of *Wonder Stories* which outlines the rules and purposes of the LEAGUE, with an application. These will be provided free of charge to those who wish to join and have not already done so, or to members who want to convert others. Please send a stamp to cover mailing cost.

The Reader Speaks

IN this department we shall publish every month your opinions. After all, this is your magazine and it is edited for you. If we fall down on the choice of our stories, or if the editorial board slips up occasionally, it is up to you to voice your opinion. It makes no difference whether your letter is complimentary, critical, or whether it contains a good,

old-fashioned brickbat. All are equally welcome. All of your letters, as much as space will allow, will be published here for the benefit of all. Due to the large influx of mail, no communications to this department are answered individually unless 25c in stamps, to cover time and postage, is remitted.

Virginia Speaks on "Love"

Editor, WONDER STORIES:

You know what? [No—what?—ED.] I've formed a theory (at last) about WONDER, and I'm pretty sure it's a good one. The obvious course is to tell you about it and let you judge though I can accurately guess your opinion on the first part.

It has several sides, all tending to one point. Firstly, I don't think your stories are really very good, especially the ones by Dr. Keller and Bob Olsen. They both write in disjointed, everyday sentences, and often use questionable grammar. (I know Olsen doesn't write for you, but my judgment of him stands.)

Secondly, none of your authors have true or beautiful ideas about love. Hervey Allen has the loveliest conception of a man's ability for love, and the truest one of what he loves. I've ever read, but so far as I know, the old boy doesn't pen science-fiction. A heroine in science-fiction, and almost any other kind of literature, must be thrown together like a poet's vision—but who gives a darn as to whether he can think or not? Not the author or the hero, certainly.

Thirdly, your heroes (your much-vaunted heroes) must be good-looking, have been to college, be either "in love" or cracking by the end of the story, and in some peculiar way they're always able, by the flick of a little finger, to destroy whole mobs of villains to save whole multitudes of foolish bleeding people. Phooey on such hack-writing! The wisest, most intelligent men are seldom good-looking.

Fourthly, your artists—and every science-fiction magazine's artists—are rotten. They come out with one good cover a year and draw blindly for the other eleven months. Winter is the one artist better than Paul and he's been putrid since the "Sublime Vigil" masterpiece. I'm not excluding that cover on Liberty done by "Lumen Winter" either.

(Speaking of Liberty, what's the idea of calling "The Walts of Death" a scientific murder mystery? It isn't scientific, and too long for the strength of the psychology to be weird. I wish I could murder every one of them—including P. B. Maxon. The whole thing's just an unfortunate accident, I guess, but if you do it too often, I'm one unfortunate reader you'll have condemned to barfing sweet curses on a padded-collie the rest of my life.)

Fifthly, your ads are so rotten I can't even write about them. Your pages contain twelve ads that are O. K. and apt with certain magazines, but I swear you don't deserve to have to print them. Having put the lie to myself and writing of them anyhow, I say, get going! Yes! With all the men who read WONDER STORIES, surely cigarette ads should work, and many others.

Sixthly, you ballyhoo a lot of things too much. If a feature's good, it plugs itself, and if it's bad, talk can't make us like it.

All this is one side. You're full of faults and you're not breaking your back trying to get rid of them. But the other—an atmosphere of friendship pervades the whole mag. Your blurbs are written to people, not just to people who have money—and there is a real distinction between the two. You answer letters the way we write them: sincerely, repetitiously, cheerfully, talking up the things you like and alarming those you don't, and you just fill them full of good nature, good humor, and puns—good and bad.

The point is, I just can't resent anything you do or say because you do things with such naive confidence that everybody else is going to be a good fel-

low and like them too. That's why WONDER is still my favorite magazine.

By the way—did you pen this? "The Moaning Lily—the strangest flower ever grown by Emma Vane." I thought our engaging, if overgrown (6' 2") and fanatic, monk grew it . . . Skip it. Your humor is funny—mine invites tears.

David H. is better than he has been for a while in "The Living Machine." Still lacks language.

Wu, Ze, Poorson, and Leetha "gamboling about the forest as gaily as a bird"—but I thought lambs gambled will linger longest in my mind, I think.

What's Paul trying to do? Haggard distinctly stated that he had been "enshrouded in a white robe," yet he drew him as *natural*! He might be trying to compete with Brundage in a masculine way, but they both need lessons in anatomy. Besides the patient, Ruseful Rufus, read "On to Altrunay" on each plane. I feel deprived of both accuracy and art.

The story itself sort of indicates a sequel. You know—they get prolific and start a new race all over again to conquer the human ants in a few centuries. Or more likely, they roundup the Selfish Ones, the Savages, and perhaps a few city converts to help them in the really rather strenuous job of fathering—and mothering—a new race.

The cover was hopeless, the poem pretty good, and the LEAGUE department as interesting as usual. It deals a death blow to one of my fondest hopes, but I can overcome that by next fall. I shall too.

Lenard did a good job, as usual. You should patent him, or everyone will be using his tricky "a. s. e." and "I may be wrong, let us hope!"

Lesser might not be ending on such a pleasant note. He may even be slandering you. After all the preceding abuse, he said—"long live all true science-fiction magz." See the point?

To Leo Rogers, I could say plenty. Condensed, it is they're all rotten—indiscriminately.

To you Mr. Hornig—either draw the trusty wastebasket closer, or haul out the old blue pencil and start. But leave this in, please? My wish for you: luck, and more luck!

VIRGINIA KIDD,

Catonsville, Md.

(Virginia, we feel as though you should drop a tear or two for our hurt feelings after having read that you do not think our stories so very good, that our artists are rotten, our ads are rotten, "The Walts of Death" is not science-fiction—wait until you read the other installments—we ballyhooed too much and are not trying to correct our faults. Coming from you, kind lady, they hurt twice as much!

Consider, please:

1. We print only the best stories we can get.
2. This is not a love story magazine.
3. We are trying to get away from the stereotyped characters you kick about.
4. Our artists receive the highest praise from all sides. Well, mostly all.
5. The ads may not be so bad as they appear to you on the surface.
6. Our story introductions are to acquaint the reader with the nature of the present story and author.
7. At least, we are trying to correct our faults—are we improving?
8. And how are all your folks?

Because of a poor artistic effect that would result, it was necessary to leave the bottoms of the planes on the cover of the May issue free from wording. A sequel to the story might be forthcoming. Take the hint, Mr. Haggard!

You can't imagine how nice it makes us feel to see that our comments on letters are so appreciated. We try to make them personal. We want each reader to be our friend, and we write to him as we would talk to him face-to-face. We don't believe in too much formality. If this quality makes you keep *WONDER STORIES* as your favorite magazine, we might soon change the name of the book to *THE READER SPEAKS* and have a department in the rear of a few pages called "Wonder Stories." How would that be? We do not try to "slam" anyone in our comments, and we are sorry if some of our remarks give that impression. Perhaps we are a bit outspoken at times. Another of our faults!

The Moaning Lily was not, as you assume, grown by Emma Vann. We noticed this double-interpretability quality about the line on the contents page when it was written, but thought it would do just as well to have some fun with it. That six-foot-eight in the story, by the way, as the height for the monk, was a typographical error. The phrase originally read, "six foot height," but the printer dropped the "h" off of "height," which was not evident, of course, in the proof-reading. Just one of those things!

We enjoyed most in your letter the concluding sentence in your fourth paragraph, about nice intelligent men being seldom handsome. This particular editor likes to be thought nice and intelligent, though he is seldom handsome!

Your last remark rates a lunch. Drop up anytime you're in the neighborhood. Or, if you can't come up, tear off the top of a Cadillac, or a reasonably exact facsimile, and see what it gets you!—EDITOR.)

A Short-Short Story

Editor, *WONDER STORIES*:

For years, I have concealed my literary genius, and at last I propose to startle an unsuspecting world with some of my pearls of wisdom. And your paper, sir, is to be my medium.

In all fairness to myself, let me state now that (1) I am a trifle more than eleven years of age (2) I am not going to criticize Paul (3) I don't care a hang if your edges are rough, smooth, or non-existent.

Since your editorial and letter columns leave only room for four stories (and those, very short ones) these ought to be extraordinarily good and unusual. But they are not unusual, although in the main they are good.

Let us have a new era of science-fiction stories, and I as the proposer shall be Public Enemy, I mean Honorary Member Number One. And here is my first stupendous short story contribution, entitled "Terra Firma":

Paul Dendon shifted uneasily in his seat as he gazed, as if in a dream, at the tiny globe that represented the world. He felt very queer and it is doubtful whether the knowledge that even the most hardened of stratospheric travellers frequently experienced the same waves of nausea that were attacking him now, would have made him feel any easier. His companions listened to Professor Harwood's remarks, as he pointed down towards the Earth.

Paul managed to stagger to his feet as the whole universe rocked and the floor sped away under his feet.

"Are you ill, Dendon?" asked the Professor. Even if an answer had been necessary, Paul would have been unable to give it, because he was being violently sick on the floor of the geography class.

Get my idea? Whilst thousands yell for more, I am unblinking.

GEORGEY WILKS,
London, England.

(It is a rare treat for us to be able to print a fiction story, such as the above, in our readers' department, and perhaps we should have listed it on the contents page. You will find short-short stories in this magazine quite frequently with endings that come as complete a surprise as Mr. Wilks' offering.—EDITOR.)

Pritchard vs. Wollheim

Editor, *WONDER STORIES*:

Donald Wollheim's letter in the March number draws me out of my shell. I wish to take up a few issues with him.

I can see that Mr. Wollheim likes science-fiction and has his own ideas about it. But I fear he is at loss when speaking of certain things.

When he says that an editor does not edit, he either has no conception of what is involved, or merely wishes to make an argument. Perhaps if he had the job of sorting out a mass of material, replying to letters in various ways and from various people, and handling a good deal of an organization such as the *SCIENCE FICTION LEAGUE*, he would get a terrific headache after the first day of it. If the editor of any magazine that one is interested in slips once in a while, you can't blame him. The editor's job is to give the readers the best stories he thinks they will like. If an editor did no editing, but took every story as it came along and had it printed, I think there would be a great uproar . . . and a greater silence thereafter. Why? Not only because of the inferior stories that might be printed, but a long string of errors in spelling, punctuation, and the like. Punctuation and spelling mean a great deal.

The editor practically put the "squeeze" on the German angle, in which Mr. Wollheim seems to get so peeved about. I, myself, have German blood in me. I dislike very much the way politics are used in Germany; but I do not condemn an entire nation for the faults of a number of its constituents. If such is the feeling, the sincere feeling, of Donald, that he must condemn; then I say he is laboring under a delusion. His case is not for a psychoanalyst. I say this because if his feelings are thus aroused against one nation for its politics then surely in the light of what has transpired in the past twenty years . . . in the last five years . . . he would no longer wish to read a newspaper of this country, or read anything from practically any other nation on this globe. He would remember that the French and English fought against Americans just as much, in a sense, as did the Central Powers. And we must not forget Mexico, Spain, the Philippines, and others. He perhaps does not know of the "patriotism" of some of our industrialists who build factories in foreign countries and have the finished products shipped here to undersell our American made products. Or perhaps he does not know of the graft in innumerable towns and cities by prominent citizens. Or maybe he doesn't know of the hundreds of thousands of criminals in this country, or of the men who sell military and government secrets to other countries to fill their own pockets. That is why I say he would not read even a newspaper. There are things which Mr. Wollheim has no doubt read, which have their origin in Germany, but he does not know it! Please, Mr. Wollheim, do not condemn when you know not. (If I'm doing the same thing, get your pen, pencil, or other implement of warfare, out of hiding.)

The story "The Sense Twister" is something that I will agree upon to a certain extent. The fact that the "twister" doesn't twist, in the story, is a debatable question, or gives a point to argue over. It is a rude shock to the reader to learn that a machine (the all-important one, at any rate) in a story does not perform its function. I would say to the editor that a reader does not always want to be fooled. I have no discussion as to the method to twist the senses in the yarn, but it probably would not work. There is, of course, a man now living who has his sense of heat and cold reversed. Whether there is any other reversal in his make-up, I could not say.

Although vampires are a bit far-fetched in a magazine of this kind, I heard an interesting news item broadcast the 21st or 22nd of January. It concerned a man over in China. He is a Chinese nearly seventy years old. A number of doctors have examined him and can find nothing. It seems, for a couple of weeks, prior to the news broadcast, he had begun to die in this daytime, and at dusk he would commence to recover! At dawn he would again begin to go into the death which lasted throughout the day. It does not take much imagination to fit a person, with this strange disease, with a form of cannibalism to get your human vampire. Think it over.

The new method of light and dark ink on the contents page ought to blanket out a lot of complaining.

The artist arguments do and don't interest me. I will say that Paul was in a slump, and that his interior drawings were getting almost jet black for the whole page; but he seems to be doing work that is acceptable now. Winter is good; and the other interior illustrations give variety, although some drawings are not always of the best.

Back to Mr. Wollheim. He says there is too little science-fiction being published. Maybe there is, when printed strictly in magazines for science-fiction. But for me, I think there is plenty. I only take about a dozen mags dealing with science-fiction, and off and

on I buy copies of a number of other publications which print at odd times one or two of this type of story. These various magazines contain everything from the adventure, through the scientific mainly, to the weird type. More magazines every month are putting a yarn of one of these styles on the market. I don't profess to know all of these magazines, or where all the stories are. As he is a collector, and I am too, he can realize what a job it is to keep track of everything that comes out, even with the help given by "Fantasy Magazine."

So help me, I think I'm through!

KENNETH B. PRITCHARD,
Pittsfield, Mass.

(We cannot help but agree with you in your third paragraph. We are not looking for any laurels, but we are glad to know that some people realise an editor's job is not merely a funnel through which stories come out of the mailbox and pour into the magazine. It is the constant and concentrated effort, the variety and diversity of duties, however, that make us love our work. There is nothing boring about it, we can assure you!)

We think that you are unfair to Mr. Wollheim in your fourth paragraph. You say that he "would no longer wish to read a newspaper, etc." We do not know that he *does* read the papers—we have never seen him read one ourselves, and we are sure that you have not. Therefore, the entire paragraph is assuming that he *does* read the papers.

That Chinaman who can sleep only in the day might just be a veteran night-watchman. Or perhaps night-watchmen are vampires-in-the-making.—EDITOR.)

Our Pal Jack

Editor, WONDER STORIES:

The May issue is one of the most enjoyable in months. "Human Ants" by J. Harvey Haggard is the story that struck me as being the best. See if you can get more stories by Haggard, will you? The new serial hit and spot with me. I like mystery stories, most of all scientific mystery tales. Oh, for the days of SCIENTIFIC DETECTIVE MONTHLY. "The Moaning Lily" and "The Living Machine" both held my interest from beginning to end. As a whole, "In Caverns Below" by Stanton A. Coblenz was interesting reading, but in my estimation it is the least best of his novels.

The illustrations by Schneeman in this issue are quite lousy. I think you had better stick to PAUL with occasional drawings by Marchionni—Eliot Dold also, if obtainable. The cover this time is just so-so. The background should have been blue.

I want more interplanetary stories—also more fiction and less non-fiction.

Here are a couple of paragraphs from *Movienews*, a weekly Chicago paper.

Pending the discovery that A. Merritt's "The Moon Pool" would make a wondrous film fantasy, Radio (RKO) is going right ahead with H. Rider Haggard's "She". Set of the week was the Ceremony of the Flame, Hall of Kings, Kingdom of Kor, Muscovy. The hall, largest interior ever constructed of the lot, fills two sound stages. While a drum pounded hollowly, a procession of brilliantly painted figures made their tortuous way toward a round platform, from the center of which flames leaped.

There were slow, bonnding dancers, stately musicians with cymbals, pipes and curved horns, panoplied priests and strange votaries with impish gold masks. They might have been Mayan, Egyptian or Greek; rather, they were all three, and yet none. The motif was carried out in the gray, sloping walls, like pyramid bases, with their slit-like floors, in the rams surmounting a wide flight of steps, and in the throne at one end of the room—a huge mosaic chair glistening with silver inlays, where sat She herself.

The beginning of this article sounds as though RKO may make "The Moon Pool" next. Let's hope so.

JACK DARBOW,
Chicago, Ill.

(We're glad that the May issue received such excellent approval from one of the Executive Directors of the SCIENCE FICTION LEAGUE, and we will do our best to get you some more interplanetary stories.)

It certainly looks as though the movie magnates are becoming more science-fiction conscious as the years go by, and we hope to see the day when at least one good science-fiction motion picture is produced every month.—EDITOR.)

Mr. Faithfully Speaks

Editor, WONDER STORIES:

Mr. Faithfully calling all WONDER STORIES Editors. Sorry I forgot to sign my name on my last verbal document, so to make amends and give any carping critic a chance to lash me, I herewith do so. I should like to come over to America and take charge of that department specially set aside to reply to all sarcastic sallies and muddy missives sent to the offices of WONDER STORIES. It would be a pleasure. YES, sir.

Just perused the February number. Paul has made a grand cover as usual, but don't you think that his skies are rather lurid, or don't you? I expect Gernsback instructs him to make them vivid in order that the mag will leap to the eye when placed among other conservative and sedate journals on the newsstand.

"The Hidden Colony" is a champion serial. I certainly hand it to Fletcher Pratt for undertaking the heroic task of translating these German and French scientific novels into English. As yet I have only read "The Life Detour," a very convincingly written novelette. Have you any more Kapital stories, written by Klever Dr. Keller, Koming along?

Ever since Eando Binder wrote that time-smashing epic "Dawn to Dusk," he has risen 100% in my estimation. Get him as a regular contributor. "The Robot Aliens" look good and I have no reason to doubt that they will be. "The Truth Gas" should have its amusing side. If it hasn't, then the author must have a different viewpoint from myself, which won't be surprising.

I see you have cut the edges smooth. For the life of me, I can't see what difference it makes. Of course if it was in circulation well, by all means cut 'em smooth at once. Remember the Reader is always Right when in the majority.

Talking of circulation, why not publish your monthly net sales? Likely as not, rival mags would follow suit, then we would be able to estimate the population of the science-fiction reading world. The chief result would be that WONDER STORIES could display their superiority in black and white.

A. Lenard's letter from Hungary was very interesting. It almost ran to the length of a novelette.

I wonder if an S.F.L. Chapter could be formed in Glasgow?

In connection with science-fiction movies, you can add my name to the petition or whatever you send in. I have just seen a new talkie version of "Dr. Mahuse"—German, of course. It can hardly be called a science-fiction film as the main themes are hypnotism and crime. Nevertheless it is an extremely eerie and thrilling drama. It has been sub-titled in English.

Here are some suggestions:

1. Enlarge the Editorial by Gernsback. Perhaps you could amalgamate it with "Science Questions and Answers." Both are invaluable features of the mag.

2. Cut out most of the goofy profiteering adverts to make way for a larger "Reader Speaks"—you'll need to if you are going to print this letter. I guess this will hurt your pocket at first, but you'll never regret it in the long run.

3. Apart from 1. and 2. Keep the rest of the mag just as it is; you're doing fine. Au revoir.

WM. G. ANDERSON,
Glasgow, Scotland.

(We feel relieved that you have sent us another letter, this time with your right name attached—the previous anonymity being an oversight on your part. We have received a couple of complaints stating that we should not print anonymous letters, and are glad to show that it was not, at least in this case, intentional.)

The covers of the magazine supply a two-fold purpose. First, they act to portray a scene from one of the stories for the appreciation of our readers, and second, they attract the eye of the newsstand scanner and make new friends everyday by this method.

We would certainly like to see a Chapter of the SCIENCE FICTION LEAGUE formed in Glasgow. We hope that you and some of your science-fiction friends join the LEAGUE and form a local Chapter. At this writing, we have only one foreign Chapter, and that in Leeds, although there are seventeen others throughout this country.

Remember that advertisements are the life-blood of any publication.—EDITOR.)

Anti-SPWSSTFM!

Editor, WONDER STORIES:

We believe that the colossal intellects and discerning brilliance of the clientele of your excellent publication will be able to sympathize with our glorious and lofty objectives in the support and continuance of the work of our heroic association, THE INTERNATIONAL AND ALLIED ORGANIZATIONS FOR THE PURPOSES OF UPHOLDING AND MAINTAINING THE USE OF METALLIC FASTENERS IN SCIENCE FICTION PUBLICATIONS OF THE UNITED STATES OF AMERICA, UNLIMITED, and will understand how demoralizing is the work of the highly insidious spawstfm headed by this unlawful and nefarious thing which calls itself by the peculiar cognomen of "dictator" or perhaps phooey ping pong (presumably its real name); we thus beseech you to send in your names to the Grand Exalted Boolewyag, No. 418, New Clown Hotel, Providence, State of Rhode Island and Providence Plantations, and hope fondly interest (6 3/4%) will be taken in our world-shaking, soul-stirring, holy anthem now following:

Strike for the BOOLEYWAG and die! and if thou diest

The BOOLEYWAG is BOOLEYWAG and the COCOLORUM rains the highest
His ray gun! and rocket roar! Let the BOOLEYWAG rain!

Hoot! for our COCOLORUM is mightier in his May!
Hoot! for our BOOLEYWAG is mightier day by day!

Burst atom! and comet swirl! Is the BOOLEYWAG sane?

and subscribe generously to our publication, THE POLYMORPHORNUCLEATED LEUKOCYTE which is published the sixth Thursday of each month (subscription price is three [5] cents Confederate States of America) and in closing let us wish you a happy arbor day.

THE GRAND EXALTED BOOLEYWAG,
THE HIGH COCOLORUM.

P.S. Mr. Hornig, the managing editor of this magazine, is enlisted and conscripted amongst our honorary (?) members, being number 37 1/2.

(As Honorary Member Number Thirty of the SPWSSTFM, or spawstfm, as you have it, it is our duty to uphold said society and we must protest against the (aaoffpounatmoafafpotusea, unlimited)—in fact, we refuse to give your society any publicity.—EDITOR.)

Paul's Covers Again

Editor, WONDER STORIES:

Come, come, Mr. Editor, don't you see—this time you have put your foot into the RAINBOW!—Yes, you have put your foot into the RAINBOW; that's what I just said! Paul's paint-box is turned upside down and you, Mr. Editor, are all wrong about colors and wavelengths! If we go on like this, next time I see a rainbow, I shall imagine the bridge of the fairies turned inside out, like your right hand if it should fit your left glove!

Are Mr. Paul's and your senses "twisted"? It seems so; how could you explain otherwise the nonsense we read on page 995 (January W.S.): "EVERY COLOR HAS A DIFFERENT WAVELENGTH (that is O.K.)—VIOLET BEING THE LONGEST AND RED BEING THE SHORTEST (page 996) . . . IF THE REFLECTED WAVES ARE VERY LONG THEY WILL AFFECT THE HUMAN EYES AS BLUE OR VIOLET . . . etc., etc."

Now look here, ordinary human eyes, as mine and those of most people, see, for instance, that the sky IS BLUE, but the "inimitable" Paul nearly always SEES the sky RED or YELLOW, which phenomenon is quite natural after reading your new theory about wavelengths and colors.

Perhaps some day you will advance another new theory in order to explain WHY space (as represented on the cover of the March W.S.) IS filled with cigarette-smoke—or is it red dust? (Something MUST account for the blue color of the background and the dark shadows of the earth and the moon). But there is something you will never be able to explain: WHY is there no shadow on the backside of the "space-time ship" and behind it?

By now you will have remembered that the wavelength of RED light is ~800 mu and of VIOLET light ~400 mu. (1 mu=.10 mm).

This time, I believe, I did not really "explode my complexes"; they went off in a low hiss, though I

must confess that I am quite fed up with the "inimitable" and the "best" and the "cream of contemporary" (you ARE modest!) Science-Fiction.

Probably now you are snapping for air and quite red (to me, blue) in your face. But please, take it easy; I am trying to help get your foot out of the rainbow by pulling your leg.

In closing, I must say that I am sorry for all which may be wrong with my English, because it is for me what colors are for you.

I just read Mr. Wollheim's letter; he is absolutely right about "The Sense Twister." This story is not stl., as little as the stories with the "fall-was-but-a-dream" ending, about which I wrote last time. The name of the story which escaped Mr. Wollheim most certainly is "A Matter of Nerves" by William Lemkin, Ph. D., and appeared in Amazing Stories, June 1932. I have this story before me and it really looks as if Mr. Nevins borrowed his idea from Mr. Lemkin's.

Too bad for your "NEW POLICY" that you did not read this "Matter of Nerves" before printing the "Twister."

So long, Mr. Editor; sometimes I shall write again!

HANS J. LESSM,
Rio Segundo, Argentina.

(We thank you very much for correcting the error on page 995 of our January issue. Of course, the statement made was just the opposite from the truth—violet are the short waves and red the long. All we can say is that the editor must have been color-blind when he let the misstatement pass into the magazine.)

You will find most of our covers with flat backgrounds because our publisher believes that the poster effect looks best on the newstand. Most of the covers show a sky, and we could not always have a blue background. Here's how Paul chooses the color for the cover each month: supposing he has had eggs for breakfast with yolks that are particularly yellow, he adds to that the color of the last cover, and divides the result by the present hue of his pet chameleon. These he has to mix well before using. As you can see, it is a very simple and effective process.

We read "A Matter of Nerves" when it was first published and were reminded of it by "The Sense Twister," but at the same time saw the improvement upon the idea which Mr. Nevins had made.—EDITOR.)

From Erin

Editor, WONDER STORIES:

You have not heard from me before, although I have been a constant reader of your magazines since 1927.

I have just completed a manuscript on the subject of space-travel, and I wish to quote one or two pieces from your magazines.

1. Small paragraph from Otto Will Gall's "Shot into Infinity" that deals with the effects of the initial high acceleration.

2. Oberth's synopsis of the psychological effects of absence of weight, from your translation of Noordung's "Problems of Space Flying."

3. The diagram of Noordung's rotary house. I did not copy the latter, however, since I reproduced it from memory.

I am enclosing a copy of the summary of this work, if you are interested, and a stamped addressed envelope for reply.

Whilst writing, I am sure that you would like to hear what I think of our magazine. Well, words fail me. All I can say is that the stories as a whole are excellent, and the illustrations, especially the covers, are superb. My only criticism is that the mags are so scarce. Being one of those unfortunate individuals who cannot afford to subscribe to all that I would like, I have to get my mags of science fiction where and when I can.

In case you should be inclined to get a "swelled head" over the above, I should like to say that in my opinion one of your immediate rivals is a somewhat better magazine at the present time, although the other is not in the running.

I feel a very tender spot for our mag, however, and I don't think that any other mag will ever reach and maintain the high standard that you have held for six years.

"Dawn to Dusk" was reminiscent of Olaf Stapledon's "First and Last Men." Have you read it? There's a story that I would like to see in the mag. It would make the best serial that you ever published.

Well, here's wishing you all the best in the world for the wonderful work you are doing. You may hear from me again soon.
A. L. SODEN,
Lishurn, No. Ireland.

(We have read with interest the outline submitted by Mr. Soden of his manuscript on space-travel, and believe that it will soon be a valuable contribution to the science of rocketry and astronautics.—EDITOR.)

We're "Out of the Rut"

Editor, WONDER STORIES:

More than once I have decided to write to you, but circumstances have always prevented me. At last, however, I have been able to borrow a stamp, and all seems set for that momentous missive which I have a faint chance of seeing in print in about a year's time.

First, a nasty one which I have been saving up for you. In March, 1934, you published a story called "Martian Madness" by P. E. Cleator. You called it a "gem." I re-commend for your perusal a story, written by Basil Tozer, "The Pioneers of Pike's Peak." In short, your "gem" is one of the worst pieces of literary piracy I have ever come across.

Your readers seem to huggle a lot over artists. Paul is all right in black and white, but when it comes to covers—! Do you think he could give us green skies for a change? I'm so tired of red. Furthermore, he often completely ignores the author's description of animals and machines and draws ideas of his own. I'm all for creative art, but not in illustrating. The best cover designer in the states, as far as science-fiction goes, seems to be Morey. He is an artist, not a draughtsman.

I like WONDER STORIES best of the science-fiction magazines, not because you give three more words than anyone else, or give away pseudo-degrees, but because most of the stories are out of the rut—you have very few absent-minded professors with lovely daughters, wooed by idiots of reporters, and your scientists, when they wander around space, very seldom choose as companions huge-bodied oafs with skulls of teak.

Now, apparently, is the time to give a list of stories and add such comments as "lousy," "great." "I don't quite see why—etc." "Why don't you get Einstein to write a story and get Epstein to illustrate it?" (Brilliant idea, now I think of it), and so on. I'm not going to, but I should just like to record my appreciation of "The Exile of the Skies." It was big, as such stories should be.

After all, H. G. Wells takes a lot of beating. He got there first, and he's still best. English, of course! I should like to visit America. It seems to me you are far more commercially minded than us, and the mob spirit seems far worse than in England. Your stories seem to confirm this.

If any of your readers would like to take the degree of spinster of scientification (S.O.S.), at the university of which I am head, all they have to do is send a cheque (cheek in American) for a dollar (four bob in English) to me at the above address, together with the accompanying examination paper, correctly filled in:

Underline the correct answer.

- Q.—What is a Lindhger? If not, why?
A.—(1) A kind of cheese (2) a kind of sausage (3) obviously.
- Q.—What is the price of Astounding Stories?
A.—(1) 25 cents (2) disgusting (3) dunno, I never bought one.
- Q.—Anything you can think of.

Passing: 5% all answers count 10%. Nothing barred, but rude ones banned.

Your certificate will probably be sent by return post, but don't mean if it isn't. Draw one for yourself.

D. W. HOLLAND,
London, England.

(When "Martian Madness" by P. E. Cleator was first published, we received a letter from an Englishman stating that it was a plagiarism of "Pioneers of Pike's Peak." We had Mr. Cleator, also an Englishman, visit the fan who made the assertion, and it turned out that the latter party, who had stated that the story was a "word for word" copy, had greatly exaggerated and had not, in fact, even seen "Pioneers of Pike's Peak" for at least a couple of decades. Your comment leads us to believe that there may be a similarity in plot. We have not got

a copy of the Pike's Peak story and do not know just how much similarity there is. We would appreciate it if you, or any other reader who may be so obliging, will send us a detailed synopsis of the plot of the old story—as detailed as possible—so that we may make comparisons.

We thank you for your kind words in the fourth paragraph, and also your amusing burlesque of our Science Fiction Tests.—EDITOR.)

A Radio "Hamateur"

Editor, WONDER STORIES:

As usual, I shall commence my letter by tossing a few fragrant well-aimed bouquets in your direction. The first one is for Paul. Congrats, Paul, for your fine work on the April cover: keep it up. The second bouquet is for you, Mr. Gernsback, for increasing the number of stories per issue in "our" magazine, and, Mr. Editor, even though you had two less stories in the April issue of WONDER STORIES than did your competitors, or rather, your chief competitor, the SCIENCE FICTION LEAGUE more than makes up the difference.

Before I forget, let me announce that I do hereby volunteer to organize a San Mateo chapter of the "League." So you Burlingame and San Mateo fans, let's hear from you. Either write or phone me, or, better yet, if possible, hop into your trusty spaceship and drop around. (Don't take that dropping part too seriously.)

I believe the story, "The Elixir of Progress," was the best story in the April issue, with "A Suitor by Proxy" a close second. More of the latter type of story, please, Mr. Editor.

And now, I hope that WONDER STORIES will go semi-monthly and that you will again publish the QUARTERLY.

PHILIP MCKERNAN,
Amateur Radio W6IYW,
San Mateo, Calif.

(Speaking of the recent improvements in WONDER STORIES, what do you think of the new price reduction? Readers are now getting as much for fifteen cents as they were previously getting for a quarter. And we intend to continue our high calibre standard of science-fiction.)

We hope that your new Chapter in the SCIENCE FICTION LEAGUE becomes a great success. We will be pleased to put any interested member in your vicinity in touch with you.—EDITOR.)

A Typical Viewpoint

Editor, WONDER STORIES:

I just read "The Robot Aliens" by Eando Binder and was impressed at once by the very humanness of the story. Not that I don't like fantastic stories that aren't so human—the more fantastic the better, but Mr. Binder's yarn shows just how people are and just how they act under such conditions.

People as a whole are so narrow-minded that, as Mr. Binder says, anything out of the ordinary is to them "just another advertising scheme." It is certainly not impossible for visitors to come to our planet from outer space. Maybe we don't have space-travel yet, but who is to say that other people on other planets haven't perfected a fuel or other means of propulsion which would allow them to traverse space? Of course, one must first grant the existence of life elsewhere in the universe, and he who will not is the tops of egotistical narrow-mindedness.

I thoroughly agree with Mr. Binder's and the Editor's opinions that space-travelers landing on the earth would be all but welcomed. They would either be killed off at once as menaces to public safety, or, if they had the form of humans, would be put into prison or into an asylum.

Science-fiction is the medium for education of mankind in anticipation of such happenings as a visit from space. Science-fiction readers have had outlined to them all the possibilities of space-travel, and writers have drawn into their stories many very plausible plans for space-traveling machines. As a result, it is indeed an unusual science-fiction fan who will not grant either the possibility of life elsewhere or the possibility of space-travel. Get a great number of people to reading science-fiction and what have we? A much more open-minded civilisation, I believe, would ultimately result.

The aim, I believe, of anybody who writes to a magazine, is to see his letter in print. I am no excep-

tion, but I hold few hopes. You have your Darrow, Ackerman, Kaletsky, and Rothman, who every few months provide you with letters which dwarf my humble attempts, and as a result, my epistles are junked for lack of space. I shall attempt to found a new Utopia, wherein the only literature is science-fiction, and that in the form of magazines. The reader's column will occupy half of these, and still leave several hundred pages in each for science-fiction. AND, the whole will be stuck together with chewing gum, glue, or anything but wire staples!

JOSEPH E. WATSON,
SPWSTFM No. 26,
Charleston, W. Va.

(Your views as put forth in this letter, we are sure, are those held by all science-fiction fans, authors, and editors—in fact, any broad-minded person. It is certainly a narrow opinion to picture the earth as the center of everything, with the sun revolving around it, literally, and the stars but a pin-hole blanket.

Your remarks carry double weight with us, for your super-intellect is proven by your membership in the great SPWSTFM! We congratulate you upon being admitted to that highly exclusive organization.—EDITOR.)

W. S. "The Leader"

Editor, WONDER STORIES:

Many science-fiction readers collect stories from "Argosy" and scan all that is to be gotten from other non-science-fiction magazines that publish occasionally, in serials or otherwise, a yarn with a scientific vein. Such collection makes a valuable asset to mind, though after a while, the drawbacks that occur may hamper the enthusiasm to this hobby, either that the collection becomes too burdensome for the lack of space, or for the lack of initiative which fails to keep up through the absence of an attractive idea behind it, which spurs the collector and sometimes solves the other problems of the hobby with one stroke.

On this point I have a suggestion to make. To have his collection look as pure science-fiction in contents should look, the WONDER STORIES can simplify and assist the collector, being the same size as all other pulp magazines are. Have the cover of the next issue include the emblem of the SCIENCE-FICTION LEAGUE. Right in the center of the illustration where some futuristic-scened action takes place, have the emblem enfolded in such way as to be considered as a part of it, as the "picture-space" goes. Such interconnection should not deter it from retaining its independence as an emblem, and it may resemble your "A Gernsback Publication" emblem.

With such cover in mind, it would become valuable were we to place it on top of the collected science-fiction pages, after they have been isolated in their full contents from all other unrelated literature. Now, I don't advise to tear off the cover, as that would only leave bare the parent WONDER STORIES—an extra loose cover is what I was after!

The truth is, that while selling many sets of "Argosies" to science-fiction fans—I am a great science-fiction fan myself—I figured to do it myself and offer it free together with an iron loose-leaf clamp to hold the pages in place, which, with a nice colored cover on top would make a book good to look at; but as I have no means for such a thing, and knowing that WONDER STORIES could make a much better job out of it, it developed into a suggestion. And here it is!

If you were to follow it, naturally, that extra cover would go to members of the SCIENCE FICTION LEAGUE only, or, maybe also to prospective members? The member in arranging the book himself, all he would have to do is to loosen the pages away—not cut them—slowly from the magazine. If cutting, you would only narrow-down the white side space, which is necessary for easy movement when turning the pages. With a loose-leaf clamp which members can obtain themselves, he can keep adding on and on all science-fiction material he gets under same attractive cover, without taking up any more space than it is necessary for a single book. And wait a minute! A condition arises, at the same time, where to his friends, his mental movement betrayed by the fanaticism of the highly imaginative illustrations, reveals its owner—an imagination! And I wish to add that in the end it can't help, also, but result in an influx of a score of new fans to science-fiction, of which, at present, your magazine is the leader.

H. WEISSMAN,
New York City, N. Y.

(We place the SCIENCE FICTION LEAGUE emblem on our cover whenever we find room for it, which is not very often. Paul is inclined to crowd his cover at times, and we have all we can do to place the present emblems and seals on it without detracting from its artistic effect.

The suggestion in your last paragraph would be, we are sure, impractical at present because of insufficient demand, but we will keep your idea in mind and hope to someday have use for it.—EDITOR.)

Rougher Edges Wanted!

Editor, WONDER STORIES:

May I make a suggestion? I find it very distressing to read WONDER STORIES while wearing a blue serge or some other similar dark suit. Little particles of paper come off and get on the cloth. That means that when I finish reading, I must go all the way upstairs to get a whiskbroom to sweep myself off.

As it is impossible to prevent these tiny particles from appearing with the type of paper you use, I would suggest the following:

Make the edges of the pages extremely rough almost to the extent of long streamers hanging from each page; starch these before putting the magazine on sale and I am sure this would solve the problem.

No matter how many particles adhered to a suit, the magazine itself could be used to brush them off. I consider this an excellent argument for the advancement of rougher edges on WONDER STORIES. It would also render an invaluable service to your readers by supplying them with a new clothes-brush each month. (That ought to hold the smooth-edge-campaigners for a while, hadn't it?)

W. VARICK NEWING III,
Alfred, N. Y.

(We can find one or two solutions for your pressing problem. Either you should read the magazine in your pajamas where you can just wiggle off the particles of paper, or chew on the edge of the magazine for about twenty minutes in order to have the edges as rough as you want them. Another good method would be to lay flat upon your dining room table and hold the magazine below the edge as you read it. Then, unless there is a high wind to blow the pieces of paper upward to you, your life is in no danger.

We refer you for further suggestions to the Dictator of the SPWSTFM.—EDITOR.)

Down on Humor

Editor, WONDER STORIES:

Quite a few years ago, when you first published your initial venture in science-fiction, I became an addict to that type of magazine. I did everything in my power to stimulate interest in that type of publication among a large circle of like-minded friends and acquaintances.

I have been faithful to that magazine uninterruptedly since that momentous first issue, and when through adversity you relinquished it to another publisher, I still stuck to WONDER STORIES although I also bought the other magazine. Then came Street and Smith and the three magazines are bought by me religiously month after month.

But now, I feel the urge of writing, because WONDER STORIES is slipping and slipping badly. Do you know why? Perhaps you are too close to your brainchild. Perhaps you don't realize that S. & S. are gradually weaning your good old authors away from you.

I used to read your publication from cover to cover . . . during the past year I pased up quite a few stories . . . and after glancing through the current (April) issue, I threw it out, bodily, unread. Most of your stories are slapstick, "humorous" you call them . . . they have no place in your magazine . . . your good, old authors of yesteryears are going . . . going to your competitors. Paul hasn't improved . . . he's deteriorated: too bad. He still can't draw figures.

And please, finish your stories at the end of the story . . . not at the end of the book . . . even if you have to put fillers in the bottom of the last page of the story . . . I carry the magazine around in sections for easy reading to and from business or at lunch. I could give a lot of constructive criticism . . . but the essential thing is to get better authors back in your fold.

As an advertising man, B.A., B.Sc., 45 years young, take this advice seriously from a seriously-thinking man.

BURTON T. BLOOG,
New York City, N. Y.

(After receiving the above letter, we asked Mr. Bloog to pay us a visit at his convenience, which he so kindly consented to. We had a nice talk with him and have come to the conclusion that he likes both science-fiction and humor, but does not like to see them mixed. The issue in question contained three stories that may be considered humorous, and it is easy to see why he disliked it. He says in his last sentence that he is a serious-thinking man.)

We cannot promise him that we will keep all humor out of the magazine. We want to keep him satisfied, but we must consider the majority of our readers who appreciate humorous stories, so long as the humor is not too slapstick or burlesque. We hope that he will continue to stick with us, if only for the many serious stories we print and that he will broad-mindedly overlook the humorous ones in favor of others.—EDITOR.)

Hamilton's Theory

Editor, WONDER STORIES:

In your foreword to Edmond Hamilton's "The Eternal Cycle," you say: "In this story is propounded a theory so fantastic that you have never heard anything to equal it!" Now, now! In the very second issue of your former magazine—May 1926—there was G. Peyton Wertenbaker's "The Man from the Atom"—have you forgotten? Let me quote you a few paragraphs from it:

"Our evidence has taught us that time goes in circles, in cycles. They say that, if one were to live forever, he would find eventually the whole of history repeating itself."

"You mean—?"

"That a time comes when your world or this world, after having lived and died, will live again and again die."

"With the same history, the same civilizations?"

"Yes The whole history of the universe is rigidly foreordained, and so, when time returns to its starting point, the course of history remains the same."

" You mean that some day there will be an earth like mine again? The same people? And is it true that there will be another incarnation of my body which will leave the earth at the same time I am returning?"

"It would seem so. And that incarnation would return in the cycle following your return"

These might be quotations out of "The Eternal Cycle"—but no, they appeared almost ten years ago. Perhaps there is an "Eternal Cycle" of ideas, of fiction! At any rate, just refreshing your memory a bit and pointing out to you an unusual coincidence of themes—though the latter did not prevent me from thoroughly enjoying Edmond Hamilton's novellette; I rated it as the best story of the issue, giving it "A" (or Excellent) in submitting my gradings to our estimation-page in Fantasy Magazine.

Thought "Pigments Is Pigments" and "Celestial Visitor" also good, in the same issue. Sorry, but serial "Hidden Colony" was pretty painful, in my opinion. It gave me the golly-wobbles (Martian for "fitters") to wade through what I found to be dreadfully dull instalments.

"Missing Hours" liked best in the April issue.

Are you ever thinking about releasing another Science Fiction Classic Reprint, or new set of six S-F Series?

Paul is ever synonymous with "science-fiction," of course, the living symbol of ace artwork in stff. I am always pleased when an all-Paul issue is presented. But if you are always to use other artists occasionally—I have no complaint against Marchioni or Winter or Saaty or others—but I'd rather see Clay Ferguson's work any day! There's a young fellow that's tops. All around A-1, plenty keen, says me. Or ask any fan who's seen his work. Have you seen his private illustrations for the seventeen chapters of COSMOS?

FORREST J. ACKERMAN,
Scientificianist,
San Francisco, Calif.

(We'd like to bet that less than five per cent of our present readers have read "The Man from the Atom." You can't call an idea hackneyed because someone else happened to use something like it ten

or twenty years before. "The Eternal Cycle" is still an original story. A hackneyed plot is one that is spontaneous in the minds of many authors, so that the editor receives it in one form or another at least once a week. Though these stories are written independently of each other, they are remarkably similar. We do not think that a general principal, which is not a plot anyway, such as the one in question, should be utterly discarded forever after being used once—particularly one as magnificent as that in "The Eternal Cycle."

Sorry that "The Hidden Colony" gave you the golly-wobbles. We thought that only boon-doggies were susceptible to that affliction.

At present, we are not contemplating the issuing of any more Science Fiction Classic Reprints for a while yet—though you never can tell.

We have seen some of the work of Clay Ferguson—whom we pronounce an up-and-coming artist—though not his illustrations for "Cosmos." There are two reasons why we can't let him illustrate for WONDER STORIES at the present time. First, we are already having difficulty in satisfying five artists—and second, Mr. Ferguson lives many hundreds of miles from New York, and we must have artists who can call at the office for the work. We are often in a hurry for drawings and many have to be changed before they are finally taken, and all this would be very impractical through the mails.—EDITOR.)

Flagg's Defense

Editor, WONDER STORIES:

Would you kindly print this letter in your letter column as soon as possible? Thank you.

In the March number of WONDER STORIES I read an interesting letter by Donald A. Wollheim, New York City.

Mr. Wollheim mentioned that in a story of mine published last August in Weird Tales, I borrowed from an idea of his for my central theme. To the best of my knowledge, I have never read a story of Mr. Wollheim's. Since that is the case, I believe the following facts will be of interest to Mr. Wollheim and your readers generally.

"The Distortion Out of Space" was written in 1932. Chas. Roy Cox handled it for me at that time but failed to make a sale. Seemingly the editors didn't care for it. Mr. Cox can bear me out in this.

I submitted it to Mr. Wright of Weird Tales, personally. Mr. Wright rejected on the plea that the end scarcely justified, sufficiently rounded out, the body of the story. I rewrote the end, a few hundred words, making no particular changes in the body of the story (changing a word here and there for more effectiveness, but not changing the idea), and in August or thereabouts of 1933, Mr. Wright purchased the story. It will be seen that Mr. Wright held the story for nearly a year before publishing, since it didn't appear until August, 1934. I should be interested in knowing just when and where Mr. Wollheim published his story embodying the same idea.

Best wishes to Mr. Wollheim, and to WONDER STORIES, and hoping to land soon again in your magazine's pages with a story acceptable to the editor and the readers.

FRANCIS FLAGG,
Tucson, Ariz.

(This definitely establishes the fact that Mr. Flagg's story, though only recently published, was written before Mr. Wollheim's story saw print, and that he did not borrow any ideas from another author.)

Mr. Wollheim's story was a short entitled "The Man from Ariel," and appeared in our January, 1934 number.—EDITOR.)

The I.Q. of S.F. Fans

Editor, WONDER STORIES:

It appears to be the usual custom to use the hackneyed phrases in addressing or introducing something to this department of "having read this magazine for years and liking the stories or the authors or maybe even the editor very much." I shall not because I have only read it whenever I could catch one on the fly or find one that was not nailed down.

I am very, very curious about something. Does an author, to write such stories, or a reader, to read such, have to be crazy or merely temporarily "off his nut"? I have come to the conclusion that there are only two types of people who do read them.

One type are people who are candidates for the "bughouse," the other are people with an extraordinarily well-developed imagination. As to where the dividing line between them comes, it is very hard to designate, because it is so tenuous and so indefinite. The only difference between the so-called sane people and the insane is that the insane say, do, and believe what they think, whereas others recognize that there are limitations to their thoughts and ideas and practice inhibitions of their otherwise insane conclusions. As to which class I belong, it is just as indecisive. Sometimes I am convinced that I am of the former and at other times of the latter. It really makes but little difference anyway.

I noted some months ago a letter in your magazine in which the writer declared that the only readers of *WONDER STORIES* and its class were ignorant and uneducated or words to that effect. After reading this I decided to try the "inquiring reporter" stunt and do some "pussy-footing" on my own. The foregoing is a part of the results of my investigations. Only a part though. I wandered around within the environs of my present domain and stuck my nose into a lot of places and almost lost it on a few occasions. I have found that at least sixty per cent of the readers of science-fiction magazines have an I. Q. or better than one ten. Considering the fact that these people constitute less than thirty per cent of the population, this is a very commendable average. Why it should be so is another matter. Having delved into the matter so deeply, I am still working assiduously trying to solve this apparent enigma.

You must realize though that these figures apply only in so far as can be ascertained here and does not apply to anywhere but here. If the same ratio applies in other places, you have a very commendable publication.

Now as to some other things, why do so many people have to squawk about the uneven edges of the magazine, or about what a lousy cover it has (I haven't seen the cover of one in four years), or what a rotten author one of them may be merely because it does not appeal to them. Do they think that they are the only readers of the magazine? The way I consider it is that there are all kinds of people in this world and what may not appeal to me may to someone else and do not think that it is personal insult to me if in reading the stories, I find one that I do not care for.

Now, I had better sign off before someone who belongs to my second class decides to become one of the first class to my discomfort.

CHARLES HARRISON,
San Quentin, Calif.

(Whether the readers of this magazine are "off their nut" or not depends upon who is considering it. That is the opinion of many of our poor deluded brothers who have not been gifted with very much imagination. Anyone who has varying ideas from this narrow-minded breed is "crazy.")

We have found, whenever we have investigated, that our readers have Intelligence Quotas well above the average. You will find this particularly so with our most active fans.—EDITOR.)

The Elixir Coffee

Editor, *WONDER STORIES*:

Again Paul has come through with a masterpiece of a cover! Without a doubt, this cover is the best that he has done in recent times. It is absolutely irreplicable in every detail but one. And what do you kickers about Paul's sky-blue-pink have to say about the background? The detail I mentioned is just that I don't see any of the microscopic animals I am familiar with. Where are the spirogyras, and hydras, and the rotifers that Kraus mentions in the story?

The story which the cover portrays is excellent, also. I am not sure that such a thing could happen, but I don't know enough about the subject to argue.

"The Elixir of Progress" is very original, I think. It is written much better than Bartle's other story, and I liked it very much. I have always heard that coffee is harmful to the system, but the story says just the opposite. So what?

I can't follow most of Harry Collier's reasoning in "A Sutor by Proxy." He says "It is the close contact of the atoms forming the material of your skull, and of others which constitute the physical property we associate with iron, which causes the sensation of being hit with a hammer." That, collectively, is the same as saying the pain is caused by

the contact of the hammer with the head, which is what the author denies in the preceding paragraph. He also says that electricity can be transmitted without wires. Oh yeah? This, coupled with a couple of other important facts, makes me doubt the scientific plausibility of "A Sutor by Proxy."

Is "The Insect World" supposed to be a story? The hypnotic ray at the end of "The Missing Hours" surprised me. I had expected a sleeping gas, for the reason that a gas with those effects had been used in "Between Worlds," the sf classic.

"The Prophetic Voice" presents another of those paradoxes that are always present in time stories. The theory that Manning advances in the story may be correct, but here is the way I see it. The person in the future read in his history book that there was a gap of a hundred years somewhere in the life of civilization. Therefore, he communicated with the past and told them that there would be a gap there. People, to escape some imagined menace, put themselves into suspended animation for a hundred years, which was observed by the future man. The man in the future, seeing this space, communicated with the past and told them about it. And so on, *ad infinitum*. Where does it end, and where does it begin? In other words, the whole thing was entirely illusory, caused by the message of the future man.

"In Caverns Below" continues to be very interesting, although the use of the first person sometimes annoys me. It seems to hold back the action in some way.

The Brooklyn Science Fiction League is getting ambitious. I just got their magazine today. That ought to be the beginning of the magazine for the entire LEAGUE.

A look at the results of the Science Fiction Test should give anybody a good cross-section of the best science fiction ever printed. Also authors. There should be some good suggestions there for your reprint annual. Torrance's list is excellent, also. "The Final War" should be printed in book form and sent to every politician and munitions maker in the world. There's an aim for the SFL.

I don't know what Fred Anger has against Bob Tucker and puns. His own name is a beautiful target for a list of puns, and Hoy Ping Pong is daffy anyway, so why bother?

I'm getting goofy myself, from associating with that fellow Tucker. I just joined the SPWSSTFM and got myself appointed to the exalted position of Royal Chief Twerp. As you probably know by now, the aim of this society is to get of magazines bound with chewing gum. When this grand occurrence occurs, you can make mine vanilla. (I never heard of vanilla chewing gum, but I also never heard of binding mags with gum, so we're even.)

Most of the questions you mentioned that were supposed to be tricky didn't bother me at all. The one that got me was about the sf magazines in New York. Didn't you count Fantasy Magazine, or do you consider Jamaica as being a part of New York City? Maybe my geography was at fault.

Ackerman states the scientific question accurately in his letter. I have long realized the difficulty in making those imaginative scenes. Here is an idea for an aid in making pictures of the future. The movie companies could keep on stock a model of a future city, such as they used in "Just Imagine," and whenever they need a scene, they wouldn't have to make a new model. This would make all the future cities the same, but aren't all present-day pictures of New York the same?

Enough for this month.

MILTON A. ROTHMAN,
Philadelphia, Pa.

(The April cover, which you praise so highly, contains many of the creatures Mr. Kraus mentions in his stories. The central "monster" is Paul's conception of a rotifer.

Mr. Bartle's story was not to be taken too seriously. His theory is backed up by the fact that civilization did not really forge ahead very quickly until coffee had become a popular beverage. We all know that it is a drug, though not as harmful as it is "cooked" up to be. You can believe that it would be no little matter to take coffee away from the American people.

If you will look up the points you question in "A Sutor by Proxy," you will find that the story is not so scientifically implausible.

"The Insect World" was supposed to be a story. In the Science Fiction Test Number One, we didn't count Fantasy Magazine—it is not a fiction, but a fan, publication. Even if we had, Jamaica is a part of New York City, in the borough of Queens.—EDITOR.)

From Philly

Editor, WONDER STORIES:

Well, another year has come and gone, and it is now 1935. If everything happens this year that has been predicted in stories, it ought to be some year. So far, it seems as if most authors have been rather optimistic.

No need to say anything about the cover; all you need to do is to look at my previous letters.

The stories were all super-excellent. "The Robot Aliens" takes the prize for the best. The whole story was very good, but that ending! What a shock it gave me! It took me entirely unawares, as I had never expected anything like that. No other ending has ever effected me like that.

"The Truth Gas" and "The Life Detour" are about tied. They are both excellent, but nothing very exceptional. The main thing I have against "The Truth Gas" is simply that many stories like it have been printed before, about a scientist discovering something which he thinks would be beneficial to the race, and then the author showing that too much of a good thing is not so good. Hamilton's own story, "The Man with X-Ray Eyes" is like that. Personally, I think that the truth gas might have done some thing good in the long run, after everybody had gotten used to it, but it is hard to tell what would happen, and maybe a mixture of truth and falsehood is the best thing.

I have nothing in particular against "The Life Detour," but it simply does not come up to the high standard of such stories as "The Revolt of the Pedestrians" (which I think is still Keller's best).

"The Hidden Colony" is a very good story, and the mystery is quite interesting, but I notice that Hamstein used the same idea of an automatic plantation in "Electropolis." However, I guess there is no law about an author plagiarizing his own stories, although it does make the second story less interesting.

Now that you have gotten your increased circulation, and through that your fourteen solid pages of advertising, which is what you really wanted, you ought to be able to give us some real good stories, by Edward E. Smith, John W. Campbell (what again? no, yet), Schachner, and an interplanetary novel by Hamilton. I miss those stories like "Vandals of the Void," "Beyond Pluto" (and where is that promised sequel?), and "Exile of the Skies." Do you realize that you don't have one interplanetary story in this issue? That shouldn't be too much to give us.

The idea about the phonograph plays sounds all right, but I would like to know, does a phonograph go with the records? Mine isn't worth the space it takes up. Perhaps you could combine this idea and Andrew Lenard's movies, and give us sound pictures that could be shown in any hall, even if not equipped with Vitaphone apparatus. Who is acting in these phonograph plays, anyway?

If the SCIENCE FICTION LEAGUE department keeps expanding much more, you might have to print a separate publication devoted to that.

Metinks both Henry Hasse and Bob Tucker are either crazy or just nuts. If I didn't know that Hoy Ping Fong is Bob Tucker, I would have thought that Ackerman himself had written that thing about the convention. As for the Purple Bat complaining about Paul's faces, I wish he would look at the illustration for "The Life Detour."

I think that such people as Yours Faithfully have the wrong idea about criticizing the magazine. If the criticizer is unjust, it is all right to squelch him, but just because some reader wants to make the magazine better by telling the editors what is wrong doesn't mean that all the other readers have to jump on him. I have criticized WONDER STORIES pretty severely in my time, although the letters weren't printed (I must use too strong language), but I do it for a purpose, and I like WONDER STORIES more than any other magazine on the market. The idea to the thing is that if all the readers show the editor that they emphatically do not like a thing, the editor will try to remedy this (if he is interested in the readers at all). The readers should not be satisfied with merely good stories, but only with the best. I hope this is printed to teach some readers a lesson, and to help make the magazine a better one. (If the editor doesn't get too scared.)

You bet your life that the science-fiction movie plan you discuss will be tried in other large cities; and Philadelphia will be the first. I would give anything to see those old pictures, especially "Metropolis."

MILTON A. ROTHMAN,
Philadelphia, Pa.

(Edmond Hamilton's "Truth Gas" was very well-liked by most of our readers, and any old idea was absolutely lost in the spiciness of its composition.)

Watch the SCIENCE FICTION LEAGUE department for development of the phonograph play idea, and Mr. Lenard's movies. We intend to limit the space for this department to eight pages in any one issue, with a little run-over if necessary. The same goes for "The Reader Speaks." "Science Questions and Answers" will remain within two pages.—EDITOR.)

A Sixth Sense

Editor, WONDER STORIES:

In your April number, I notice that some reader suggests that the theoretical essays of Mr. Gernsback be two pages in length rather than a half-page. Now I certainly agree with him. After all, science-fiction authors all think along abstract lines before they boil down their theories into a concrete story. In fact, it was an initial essay of Mr. Gernsback that started me on the magazine. I love to read them.

It's odd, but I was going to make the same favorable comment on that story, "The Fatal Glance." The brain of a blind man who never saw might well snap if suddenly forced to see. Also a deaf person hearing for the first time would suffer an overpowering mental reaction. I gather that some brand new sense was involved in "Fatal Glance," something even deeper than seeing and hearing.

Do you know, I think that only the "on-the-surface" stories lend themselves best to the screen. The very subtle philosophies which are really the most original in story form ("Fatal Glance," for instance) could not be screened at all except by some people's conversation which is not considered pictorially interesting. Your kind of fiction might be therefore underestimated by the movie-public who could never get your really most original stories, those based on thoroughly intangible illusions, those abstract thrills that occur deep in the brain, away from the eye. You might easily screen the alien robots, but how could you ever convey to an audience the important idea that a personality millions of miles away was propelling itself into the detached form of the robot? You would just have to say it with words. I'm afraid that the science-fiction principle on the screen might degenerate into just explosions of fantastic airships and giant machines, and you know that would not adequately illustrate your stories in all their best phases.

I notice that your writers are not yet prone to spelling phonetically, for which fact I am glad. I write a little for the papers so I am enjoining for Mr. Gernsback or yourself a rather dry but tearfully earnest plea for stems. (A Tribune article of mine). If the phonetic principle enters in, I think it should be the other way around. Keep the significant stems, but pronounce them as nay-tion according to the real vowel sounds. That could be accomplished in the future generations without making all the wonderful books in today's libraries utterly unintelligible. For what child wants to learn two systems of spelling, and what ambitious persons are going to re-spell all the books?

I know the last subject is irrelevant to our special business, but I thought you might be interested.

I hope your magazine contains in the future more gems like "The Fatal Glance." It's so easy to thrill with colossal machines spitting blue flames, but not so easy to move a reader with an idea alone. When the latter is terrifying without any pictorial aid, that to me is the best thrill of all.

EMMA VANNE,
Westfield, N. J.

(You are right about "The Fatal Glance." The author had something more in mind than sight and hearing when he wrote the story.)

As you say, no motion picture can really portray this spirit of science-fiction. That quality has to be in the audience. That is why science-fiction movies have always brought very high praise from some critics and condemnation from others.

Your little story, "The Moaning Lily," has brought forth much praise, and we hope to receive more of your efforts for our careful consideration.—EDITOR.)

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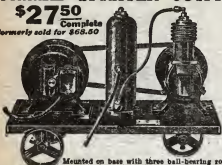
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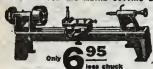
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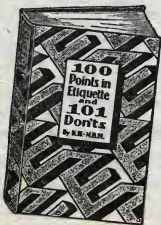
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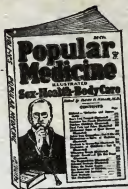
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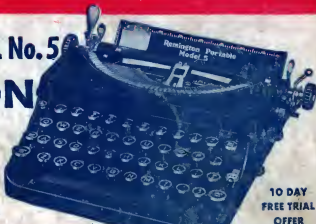
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